

Dixon Environmental Services LLC
4010 N 7th Street, Tacoma, WA 98406
Tel 253.380.4303
www.DixonES.com



REMEDIATION INVESTIGATION SUMMARY / **CLEANUP ACTION PLAN**

Snohomish County Parcel #s 29050900300100 and 29050900200900

**1871 Ross Avenue
Everett, WA 98201**

May 22, 2024

Prepared for:

Guntower Capital LLC
1421 34th Avenue, Suite 300
Seattle, WA 98122

Prepared by:

Dixon Environmental Services LLC
4010 N 7th Street
Tacoma, WA 98406



Brian A. Dixon
President/Principal Environmental Scientist

Andrew Blake, L.G.
Licensed Geologist #2928



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1.0 Introduction

On behalf of Guntower Capital LLC, Dixon Environmental Services (Dixon ES) has prepared this Remedial Investigation (RI) Summary / Cleanup Action Plan (CAP) for the petroleum releases that have been documented at the Dagmars Marina Property, addressed at 1871 Ross Avenue in Everett, Washington (the Property) (Figures 1 and 2). This report was prepared for submittal to the Washington State Department of Ecology (Ecology) and was developed to meet the general requirements of a CAP as defined by the Washington State Model Toxics Control Act (MTCA) Regulation in Chapters 173-340-350 through 173-340-410 of the Washington Administrative Code (WAC).

Based on the results of the investigations discussed within this report, it appears that releases of petroleum hydrocarbons have occurred on the Property associated with the historical Marina operations. As established in WAC 173-340-200, a “Site” is defined by the full lateral and vertical extent of contamination that has resulted from the release of hazardous substances; therefore, all areas impacted by the release(s) on the Property are referred to herein as the “Site”.

1.1 Document Purpose

1.1.1 Remedial Investigation Summary

The purpose of an RI is to collect data necessary to adequately characterize the Site for the purposes of developing and evaluating remedial alternatives consistent with WAC 173-340-350(7).

A Remedial Investigation Report and Supplemental Remedial Investigation Report were previously completed for the Site by Apex Companies, LLC (Apex) (Apex 2023a and Apex 2023b), which include more detailed information regarding the RI process.

The RI components of this report are intended to be more succinct, which present historical information regarding the former use of the Property, briefly summarize the scope and findings of each environmental investigation that has been conducted at the Site, and present a Conceptual Site Model (CSM) for the contaminant release, transport, and potential exposure pathways at the Site.

1.1.2 Feasibility Study

The purpose of a feasibility study is to develop and evaluate remedial alternatives for the Site and to select the most appropriate alternative based on the criteria specified in MTCA 173-340-360(2). However, our proposed remedy of excavation and off-site disposal is considered by Ecology to be a permanent solution under MTCA and there a feasibility study and disproportionate cost analysis were not performed.



1.1.3 Cleanup Action Plan

As provided in WAC 173-340-360 and -380, the purpose of the CAP is to present the objectives of the cleanup action, the technical components of implementing the selected cleanup method, and the means and methods proposed for compliance monitoring activities.

2.0 Background

The following section provides a description of the Property, a summary of available environmental data for the Site, and a description of the physical characteristics for the vicinity.

2.1 Property Location and Description

The Property consists of a two Snohomish County Tax Parcels (#29050900300100 and 29050900200900), 81.58 acres in size, addressed at 1871 Ross Avenue in Everett, Washington (Figures 1 and 2).

The Property is currently utilized as a dry dock boat storage facility and marina, collectively known as Dagmars Marina. Portions of the property are rented to various entities, including: Snohomish Marine (boat maintenance), Boat Country (boat sales), Signal Trailer (trailer sales), and a residential occupant.

The current Property layout, allocated tenant areas, and structures are depicted on Figure 2.

2.2 Historical Land Use Summary

Based on a review of historical aerial photographs and County Assessor records, it appears the Property was utilized for residential and agricultural purposes prior to construction of the existing Marina in the late 1970's.

The aerial photographs taken between 1941 and 1973 depict several structures on the Property, likely residential in nature, and/or barns associated with the agricultural land that was apparent on the undeveloped portions of the Property. Log booms were noted adjacent to the west of the Property in the Snohomish River in the aerial photographs taken between 1954 and 1973, however it appears likely that these features were associated with the former paper mill on the west side of the Snohomish River, and were not likely associated with any timber operations on the Property itself.

The marina and associated boat storage was first evident in the 1979 aerial photograph and remained evident in all subsequent photographs.

Current permanent structures on the Property, general use, location, and construction date (as provided by Snohomish County) are summarized in the table below:



Construction Date	Description	Location
1961	1,952 square foot (sf) residential dwelling.	Southeast portion of parcel #29050900200900.
1961	1,430 sf dwelling converted to a commercial office for Boat County sales. Associated 1,176 sf detached garage utilized for Boat County service and parts.	Eastern side of Parcel #29050900200100.
1970	4,180 sf commercial garage, occupied and operated by Snohomish Marine.	Northwestern portion of Parcel #29050900200100.
1978	2,081 sf commercial maintenance shop operated by Dagmar's Marina.	Central portion of parcel #29050900200900.
1987	1,176 sf commercial office occupied and operated by Dagmar's Marina.	West central portion of Parcel #29050900200100.

2.3 Environmental Investigations

The following sections briefly summarize the release discovery and subsequent environmental investigations conducted at the Site. The types and locations of the historic explorations from the investigations are depicted on Figures 5 through 12 of Apex's RI Report, and Figures 4 through 7 of Apex's Supplemental RI Report. These figures and associated data tables from said reports are included as Appendix A.

2.2.1 Phase I Environmental Site Assessment – Apex, 2022

On November 21, 2022, Apex completed a Phase I Environmental Site Assessment (ESA) for the Property. Dixon ES was unable to obtain a copy of the Phase I ESA report, however the findings of the assessment were summarized within subsequent documents completed by Apex. According to these summaries, Apex identified the following Recognized Environmental Conditions (RECs) at the Property that warranted further evaluation:

- Two 20,000-gallon aboveground storage tanks (ASTs) were identified near the Dagmar's Marina Maintenance Shop. Evidence of leaks were noted from the AST piping and in the fueling area, outside of containment.
- One AST was historically present on the Property, which was of questionable structural integrity. According to a site inspection conducted by Ecology as part of a National Pollutant Discharge Elimination System (NPDES) permitting process in 2007, the tank was flagged as in need of immediate replacement.
- A limited area of soil staining was observed on the exterior gravel surface adjacent to the Dagmar's Marina Maintenance Shop, which houses a 500-gallon AST.



- Two apparent vaults were observed near an old barn, which were noted as possible relic petroleum underground storage tanks (USTs) or vaults related to former dairy operations.
- The Property was listed on Ecology's Confirmed and Suspected Contaminated Sites List (CSCSL) related to potential arsenic contamination in groundwater identified during a utility project in 2004.
- A maintenance operation was identified at the Snohomish Marine Building (formerly Mercer Marine). According to a compliance site inspection conducted by Ecology in 2007, this area presented a material threat to the environmental quality of the Property due to their storage and handling practices of hazardous materials.

2.2.2 Direct Push Explorations – Apex, 2022

In September of 2022, Apex oversaw the advancement of 14 borings using direct push drilling techniques. The borings were completed as follows:

- Borings AST-1 through AST-3 were completed to evaluate potential impacts associated with the two current 20,000-gallon ASTs. Soil samples collected from these borings were analyzed for gasoline-range petroleum hydrocarbons (GRPH), diesel-range petroleum hydrocarbons (DRPH), and oil-range petroleum hydrocarbons (ORPH).
- Borings SB-5 and SB-6 were completed to evaluate potential impacts associated with the former AST identified by Ecology in 1993. Soil samples collected from these borings were analyzed for GRPH, DRPH, and ORPH.
- Borings Shop-1 and Shop-2 were completed to evaluate potential impacts associated with the observed staining outside the Maintenance Shop. Soil samples collected from these borings were analyzed for DRPH and ORPH. One sample was also analyzed for polychlorinated biphenyls (PCBs).
- Borings Vault-1, Vault-2, and Barn-1 were completed to evaluate potential impacts in the vicinity of the relic vaults and an outflow pipe identified approximately 60 feet east of these site features. Soil samples collected from these borings were analyzed for DRPH, ORPH, organochlorine pesticides, organophosphate pesticides, and chlorinated acid herbicides.
- Borings SB-1 through SB-4 were completed to evaluate potential impacts associated with historical waste storage and outdoor marine maintenance in the vicinity of the Snohomish Marine Building. Soil samples collected from these borings were analyzed for GRPH, DRPH, ORPH, volatile organic compounds (VOCs), and select metals.

Groundwater sampling attempts from the majority of the direct push borings were reportedly unsuccessful due to tight soil conditions. It appears that only one boring produced sufficient groundwater for sampling, which was SB-4. A reconnaissance groundwater was collected from this boring, which was analyzed for GRPH, DRPH, ORPH, and VOCs.



Soil Analytical Results – Current AST Area

- The soil sample collected from boring AST-2 at a depth of 3 feet below ground surface (bgs) contained concentrations of GRPH in excess of its MTCA Method A Cleanup Level. This sample also contained concentrations of ORPH and DRPH, however the values were below their respective cleanup levels.
- The remaining soil samples reported no detectable concentrations of selected analytes, or contained concentrations below their respective MTCA Method A Cleanup Levels.

Soil Analytical Results – Former AST Area

- The soil samples collected from this area reported no detectable concentrations of selected analytes, or contained concentrations below their respective MTCA Method A Cleanup Levels.

Soil Analytical Results – Maintenance Shop Area

- The soil sample collected from boring Shop-2 at a depth of 2.5 feet bgs contained concentrations of DRPH and ORPH in excess of their respective MTCA Method A Cleanup Levels. This sample was also analyzed for PCBs, which were not detected above laboratory reporting limits.
- The remaining soil samples reported no detectable concentrations of selected analytes, or contained concentrations below their respective MTCA Method A Cleanup Levels.

Soil Analytical Results – Suspected Vault and Barn Area

- The soil samples collected from this area reported no detectable concentrations of selected analytes, or contained concentrations below their respective MTCA Cleanup Levels.

Soil Analytical Results – Snohomish Marine

- The soil samples collected from this area reported no detectable concentrations of selected analytes, or contained concentrations below their respective MTCA Cleanup Levels.

Groundwater Analytical Results – Snohomish Marine

- The groundwater sample collected from boring SB-4 (GW4) contained concentrations of DRPH, ORPH, and benzene above their respective MTCA Method A Cleanup Levels.

The results of this investigation indicated the following:

- A surface release of GRPH was identified to the north of the existing ASTs, extending to a depth of approximately 5 feet bgs.
- The presence of the former AST on the north side of the Property does not appear to have resulted in a significant release to the environment.



- A surface release of DRPH and ORPH was identified to the north of the Maintenance Shop, extending to a depth of approximately 5 feet bgs.
- The presence of the vaults does not appear to have resulted in a significant release to the environment.
- A petroleum release was identified near a catch basin down-gradient of the Snohomish Marine Building. Impacts were identified in groundwater, however the source had not been adequately defined.

2.2.3 Well Installation and Analysis – Apex, 2022

In September of 2022, Apex installed one groundwater monitoring well (MW-1) in the area where arsenic was previously detected during a utility project in 2004. The well was installed to a depth of approximately 15 feet bgs, screened from 5-15 feet.

One soil sample was collected during installation of the well, and one groundwater sample was collected after appropriate well development to minimize turbidity. The soil sample was analyzed for Resource Conservation and Recovery Act (RCRA) 8 metals, while the groundwater sample was only analyzed for arsenic.

Soil Analytical Results

- The soil sample collected from MW-1 contained detectable concentrations of select metals, however the values were below their respective MTCA Method A Cleanup Levels.

Groundwater Analytical Results

- The groundwater sample collected from MW-1 contained arsenic concentrations above its MTCA Method A Cleanup Level.

Apex concluded that the arsenic concentrations detected in groundwater appeared to be caused by naturally elevated background concentrations of arsenic in soil, but also indicated that further assessment was warranted.

2.2.4 Drainage Sediment Assessment – Apex, 2022

To evaluate the potential impacts of current and historical operations on Snohomish River sediments, Apex conducted a drainage sediment assessment in September of 2022.

Sixteen drainage sediment samples were collected from the stormwater outfall locations and the northern surface drainage system.

Samples were analyzed for one or more of the following contaminants of concern: DRPH, ORPH, polycyclic aromatic hydrocarbons (PAHs), select metals, organochlorine pesticides, organophosphate pesticides, chlorinated herbicides, PCBs, and/or chlorinated phenols.



The samples collected during this assessment reported no detectable concentrations of selected analytes, or contained concentrations below their respective Cleanup Screening Levels (CSL) (WAC 173-204 Sediment Cleanup Users Manual [SCUM] and WAC 173-204 Sediment Management Standards). As such, no further assessment appeared warranted.

2.2.5 Remedial Investigation – Apex, 2023

In 2023, Apex conducted a remedial investigation to further evaluate the nature and extent of contamination previously identified on the Property. The investigation scope was as follows:

- Nine soil borings (AST-4, AST-4A, AST-4B, AST-5, AST-6, AST-6A, AST-6B, AST-7, and AST-8) were completed in the vicinity of the active AST release. Samples from this area were analyzed for GRPH, DRPH, ORPH, VOCs, select metals, and/or PAHs.
- Five soil borings (Shop-3, Shop-4, Shop-4A, Shop-4B, and Shop-5) were completed in the vicinity of the Maintenance Shop release. One reconnaissance groundwater sample was collected from boring Shop-4 (Shop-4GW). Samples from this area were analyzed for GRPH, DRPH, ORPH, select metals, PCBs, and/or PAHs.
- Fourteen soil borings (SB-5 through SB-10, and SB-13 through SB-21) were completed in the vicinity of the Snohomish Marine catch basin release. One reconnaissance groundwater sample was collected from boring SB-7 (GW-7). Samples from this area were analyzed for GRPH, DRPH, ORPH, VOCs, select metals, and/or PAHs.
- Two soil borings (SB-11 and SB-12) were completed in the vicinity of an inactive septic tank identified near the Snohomish Marine building. Samples from this area were analyzed for GRPH, DRPH, and ORPH.
- Four soil borings (SB-22 through SB-25) were completed in the vicinity of a former UST potentially located to the west of the Snohomish Marine building. The presence of this former UST was disclosed to Apex during the RI and was not previously known. Samples from this area were analyzed for GRPH, DRPH, ORPH, and VOCs.
- Three soil borings (SB-15 through SB-17) were completed in the vicinity of a suspected UST identified during a geophysical survey, located near the southwest corner of the Snohomish Marine building. Samples from this area were analyzed for GRPH, DRPH, and ORPH.
- Three groundwater monitoring wells were installed (MW-2 through MW-4) in the vicinity of the Snohomish Marine building. Samples from this area were analyzed for GRPH, DRPH, ORPH, and VOCs.
- One groundwater monitoring well (MW-5) was installed in the vicinity of the Maintenance Shop. Samples from this area were analyzed for GRPH, DRPH, ORPH, and VOCs.
- Four soil borings (ARS-1 through ARS-4) were completed in the area where arsenic was previously detected in groundwater. Samples from this area were analyzed for select metals.



Soil Analytical Results – Current AST Area

- The soil samples collected from borings AST-4B and AST-6 at depths between 3 and 10 feet bgs, contained concentrations of GRPH in excess of its MTCA Method A Cleanup Level.
- The soil samples collected from boring AST-6 at depths of 3 and 10 feet bgs also contained concentrations of one or more petroleum related VOC (benzene, toluene, ethylbenzene, xylenes [BTEX], or naphthalene) in excess of their respective cleanup levels.
- The remaining soil samples reported no detectable concentrations of selected analytes, or contained concentrations below their respective MTCA Method A Cleanup Levels.

Soil Analytical Results – Maintenance Shop Area

- The soil samples collected from boring Shop-4 at depths of 3 and 5 feet bgs, contained concentrations of GRPH in excess of its MTCA Method A Cleanup Level.
- The remaining soil samples reported no detectable concentrations of selected analytes, or contained concentrations below their respective MTCA Method A Cleanup Levels.

Groundwater Analytical Results – Maintenance Shop Area

- The reconnaissance groundwater sample collected from boring Shop-4 contained concentrations of DRPH in excess of its MTCA Method A Cleanup Level.
- The groundwater sample collected from monitoring well MW-5 contained concentrations of DRPH below its MTCA Method A Cleanup Level.

Soil Analytical Results – Snohomish Marine Area

- The soil samples collected from this area reported no detectable concentrations of selected analytes, or contained concentrations below their respective MTCA Cleanup Levels. The soil borings advanced closest to the catch basin of interest exhibited the highest levels of detectable hydrocarbons. Specifically, the soil sample collected from MW-3, at a depth of 6-inches bgs, contained 1,860 mg/kg DRPH, which is only slightly below the MTCA Method A Cleanup Level of 2,000 mg/kg.

Groundwater Analytical Results – Snohomish Marine Area

- The reconnaissance groundwater sample collected from boring SB-07 (GW07) contained concentrations of DRPH in excess of its MTCA Method A Cleanup Level.
- The groundwater sample collected from monitoring well MW-3 contained concentrations of DRPH slightly exceeding its MTCA Method A Cleanup Level.
- The groundwater samples collected from monitoring wells MW-2 and MW-4 contained detectable concentrations of DRPH, however the values were below its MTCA Method A Cleanup Level.



Soil Analytical Results – Arsenic Area

- None of the soil samples collected in this area contained concentrations of metals of concern in excess of their MTCA Method A Cleanup Levels. This appears to verify Apex's previous conclusion that the arsenic detected in groundwater was caused by naturally elevated background concentrations in soil and not from an industrial source on the Property.

2.2.6 Sediment Analysis – Apex, 2023

Per the request of Ecology, Apex performed a sediment characterization sampling event in August of 2023 to verify that in-water sediment impacts are not present on the Property. Specifically, Ecology requested that samples be collected near the boat ramp, marina pilings, historical pilings, and the stormwater outfall.

Sixteen surface sediment samples and seven subsurface vibracore borings were completed during this investigation and samples were analyzed for one or more of the following potential contaminants of concern: DRPH, ORPH, PAHs, semi-volatile organic compounds (sVOCs), select metals, total organic carbon, total volatile solids, ammonia/sulfides, and organometallics.

PCBs were not included as potential contaminants of concern, which appears appropriate based on our review of historical operations and site features which would not indicate the use of storage of PCB containing materials at the Property. Additionally, during the initial drainage sediment analysis, PCBs were not detected in any of the samples collected (Section 2.2.3)

Sediment Analytical Results

- Select metals were detected in all of the sediment samples, however the concentrations were below appropriate screening levels and appeared to be attributed to natural background conditions.
- None of the sediment samples contained concentrations of DRPH, ORPH, sVOCs or PAHs above their appropriate screening levels.
- Sulfides were detected in one of the samples at a concentrations exceeding its appropriate screening levels, however this was determined to be due to natural processes, not from industrial activity, and did not warrant remedial action.

Based on the results of the sediment analysis, it appears that no further action is warranted associated with this media.



2.3 Geology and Hydrogeology

2.3.1 Regional Geology

The Site is located in the Puget Lowlands geologic region, an elongated topographic and structural depression filled with complex sequences of glacial and non-glacial sediments that overlie bedrock. Continental ice sheets up to 3,000 feet thick covered portions of the Puget Lowland several times during the Quaternary period. Retreating ice carved new landscapes, rechanneled rivers, drained or formed lakes, and deposited glacial drift including till and outwash (WA DNR, 2002).

According to the United States Geologic Survey (USGS) Natural Resources Conservation Service (NRCS), the primary soil type in the area is Puget Silty Clay Loam. This soil type is characterized by slow infiltration rates with layers impeding downward movement of water, or soils with moderately fine or fine textures.

2.3.2 Regional Hydrogeology

The primary aquifers in the Puget Sound region are typically overlain by relatively impermeable glacial till deposits that are present at or near the ground surface. Within these till deposits are localized areas or lenses of water-bearing sands and gravels that may result in a shallow, perched water table. Lateral and vertical migration of shallow groundwater may be impeded by the relatively impermeable nature of the till and by the sometimes-discontinuous nature of the perched water-bearing sands and gravel. Perched and discontinuous zones of shallow groundwater may be seasonally or perennially present, depending on site-specific conditions. Shallow groundwater flow directions fluctuate and tend to follow topographic gradient but are also affected by seasonal high-water tables, variable soil characteristics, as well as utility corridors.

The nearest surface water body is the Snohomish River, bordering the western portion of the Property.

2.3.3 Site Geology

Previous environmental investigations conducted by Apex have shown the Site to be underlain with primarily surface fill underlain by unconsolidated fine-grained alluvium.

2.3.4 Site Hydrogeology

Groundwater encountered during previous investigations conducted by Apex was generally present between approximately 2.5 and 5 feet bgs.



3.0 Conceptual Site Model

This section provides a summary of the conceptual site model, which includes a discussion of the contaminants of concern (COCs), the media of concern, the distribution of contamination, and the potential exposure pathways for the Site.

3.1 Contaminants of Concern

Based upon the results of previous investigations, the primary COCs for the 3 release locations on the Site include:

3.1.1 Current AST Area

- DRPH;
- ORPH;
- GRPH;
- BTEX; and,
- Naphthalene

3.1.2 Maintenance Shop Area

- DRPH;
- ORPH; and,
- GRPH

3.1.3 Snohomish Marine

- DRPH; and,
- ORPH

3.2 Media of Concern

Based upon the results of previous investigations, soil and groundwater are the only media of concern for the Site. Sediment does not appear to have been impacted by the isolated petroleum releases on the upland portions of the Property.

3.3 Distribution of Contamination

3.3.1 Current AST Area

The lateral extent of soil impacts appears limited to an area of approximately 400 square feet, on the north side of the AST fueling canopy. The northern extent of impacts are defined by the samples



collected from borings AST-5, AST-6A, AST-6B, and AST-7; the eastern extent of impacts are defined by the samples collected from boring AST-8; the southern extent of impacts are defined by the samples collected from borings AST-3 and AST-8; and the western extent of impacts are defined by the samples collected from borings AST-1, AST-4, and AST-4A.

The depth of soil impacts appears to extend between approximately 2 and 11 feet bgs. The vertical bound to contamination is best represented by sample results from borings AST-4B and AST-6, which are located in the area of the release.

Groundwater does not appear to have been encountered during investigations in this area.

3.3.2 Distribution of Contamination – Maintenance Shop Area

The lateral extent of soil impacts appears limited to an area of approximately 250 square feet, on the north side of the maintenance shop. The northern extent of impacts are defined by the samples collected from borings Shop-3 and Shop-4B; the eastern extent of impacts are defined by the samples collected from boring Shop-5; the southern extent of impacts are defined by the samples collected from boring Shop-1; and the western extent of impacts are defined by the samples collected from boring Shop-4A.

The depth of soil impacts appears to extend between approximately 2 and 6 feet bgs. The vertical bound to contamination is best represented by sample results from borings Shop-2 and Shop-4, which are located in the area of the release.

Groundwater collected from a reconnaissance sample in this area contained concentrations of DRPH in excess of its MTCA Method A Cleanup Level, however groundwater sampling using direct push sampling methods tends to bias results high. A follow up sample collected from a properly installed and developed resource protection well contained DRPH concentrations below its MTCA Method A Cleanup Level.

3.3.3 Distribution of Contamination – Snohomish Marine Area

The lateral extent of soil impacts appears limited to an area directly surrounding a catch basin, located on the southeast side of the Snohomish Marine building. Soil analytical results have thus far not detected petroleum contamination at concentrations exceeding MTCA Method A Cleanup Levels, however petroleum related contaminants were detected in groundwater at concentrations exceeding their respective cleanup levels, indicating a source is present in this area.



3.4 Exposure Pathways

The following section discusses the confirmed and potential human and ecological exposure pathways at the Site.

3.4.1 Soil Pathway

Potential exposure pathways for soil contamination include direct dermal contact or ingestion. Until such time the existing soil contamination is removed, or controls are in place to prevent direct contact with this material, the soil pathway will be considered complete.

3.4.2 Groundwater Pathway

Potential exposure pathways for groundwater contamination include direct dermal contact or ingestion by construction workers encountering shallow perched zones during remediation activities or construction work. This exposure pathway will be considered complete until the contamination is remediated or controls are in place to prevent direct contact.

Dixon ES has reviewed Ecology's database for water supply wells in the area and has found that none appear to exist within a 1-mile radius of the Property. Therefore, while adverse impacts to shallow groundwater beneath the Property is confirmed, the potential for adverse impacts to a regional drinking water source is low.

3.4.3 Vapor Pathway

The air-filled pore space between soil grains in the unsaturated zone is referred to as soil vapor or soil gas. Soil vapor can become contaminated from the volatilization of contaminants adsorbed to soil mineral surfaces and/or dissolved in groundwater.

Based on the results of previous investigations, it appears unlikely that the existing contamination would present a vapor encroachment condition to existing on-Property structures. Only one groundwater sample (GW4) contained contaminant concentrations exceeding appropriate vapor intrusion (VI) screening levels, which was collected from a temporary well, located over 50 feet from any occupied structure. The permanent monitoring well (MW-3) installed adjacent to this previous sample location contained contaminant concentrations below applicable VI screening levels.



3.5 Points of Compliance

The point compliance is the location where the enforcement limits will be measured and cannot be exceeded.

3.5.1 Point of Compliance for Soil

The point of compliance for direct contact is throughout the Site, from ground surface to 15 feet bgs. This is the depth at which one would reasonably assume workers could encounter contaminated soil during construction or development activities.

3.5.2 Point of Compliance for Groundwater

The standard point of compliance for groundwater is from the uppermost saturated zone extending vertically to the lowest most depth which could potentially be affected by the release at the Property.

3.6 Proposed Cleanup Levels

The proposed cleanup levels for the Site are based on the MTCA Method A Levels for Unrestricted Land Use. Proposed cleanup levels for COCs in soil and groundwater at the Site are presented in the table below:

MTCA Method-A Cleanup Levels for Soil and Groundwater (MTCA Cleanup Regulation 173-340-900: Tables 720-1 and 740-1)		
Contaminant of Concern (COC)	Soil Cleanup Levels (mg/kg)	Groundwater Cleanup Levels (µg/L)
GRPH	30 ¹	800 ¹
DRPH	2,000	500
ORPH	2,000	500
Benzene	0.03	5
Toluene	7	1,000
Ethylbenzene	6	700
Xylenes	9	1,000
Naphthalene	5	160

¹ Gasoline Range Organics: Gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture has a soil CUL = 100 mg/kg. All other gasoline mixtures have a soil CUL = 30 mg/kg. For groundwater, the CUL is 1,000 ug/l for gasoline mixtures without benzene and 800 ug/l for all other gasoline mixtures.

3.7 Terrestrial Ecological Evaluation

A terrestrial ecological evaluation (TEE) form was completed for the Site, which indicates that the Site qualifies for an exclusion from further evaluation using the criteria in WAC 173-340-7491 (Appendix B). Specifically, at the conclusion of the cleanup action, all soil contamination will be removed within the upper 15 feet.



4.0 Cleanup Action Plan

The proposed remedial alternative for the Site is excavation and disposal of petroleum contaminated soil and subsequent attenuation of petroleum impacts to groundwater by virtue of source removal. The main components of the cleanup action are discussed below.

4.1 Monitoring Well Decommissioning

Monitoring wells located within the proposed excavation footprints (MW-3 and MW-5) be abandoned in accordance with the requirements of the Ecology Water Well Construction Act (1971), RCW 18.104 (WAC 173-160-460).

4.2 Soil Excavation and Disposal

At each release location, soil will be removed using conventional excavation methods. Subsurface conditions will be field screened by a Dixon ES environmental scientist or geologist for the presence of contaminants using a photoionization detector (PID) as well as visual and olfactory observations to direct the advancement of the remedial excavation.

Conceptual depictions of each remedial excavation area are presented on Figures 3 through 5; however, the full extents of excavation will be dependent on field conditions.

4.3 Construction Dewatering

Based on the results of previous investigations, we anticipate that shallow groundwater seepage may enter the excavation when at design depths of greater than 4 feet bgs.

It is expected that this seepage can be handled by digging interceptor trenches in the excavation and pumping from sumps into a holding tank on the Property.

The holding tank will be emptied as needed by a vacuum truck service for proper disposal.

4.4 Waste Profiling and Disposal

Contaminated soil generated during excavation activities will be properly profiled prior to remediation using the analytical data collected during previous investigations. As such, the contaminated soil can be loaded directly into trucks and trailers and hauled off Property. Specific documentation requirements must be met for transportation and disposal of the contaminated soil. This documentation includes: analytical data, waste profiles, waste manifests, and bills of lading.



Unless otherwise approved by Dixon ES and the Property owner, the contaminated soil will be taken to:

Sno River Delta Soils
17 East Marine View Drive
Everett, WA 98213

5.0 Compliance Monitoring

There are three types of compliance monitoring identified for remedial cleanup actions performed under MTCA (WAC 173-340-410): protection, performance, and confirmational monitoring. A paraphrased definition for each is presented below (WAC 173-340-410[1]):

- Protection Monitoring - To evaluate whether human health and the environment are adequately protected during construction and the operation and maintenance period of a cleanup action.
- Performance Monitoring - To document that the cleanup action has attained cleanup standards.
- Confirmational Monitoring - To evaluate the long-term effectiveness of the cleanup action once cleanup standards or other performance standards have been attained.

5.1 Protection Monitoring

A Health and Safety Plan (HASP) will be prepared that identifies the known physical, chemical, and biological hazards associated with the remedial activities at the Site, as well as the hazard monitoring and prevention procedures.

5.2 Performance Monitoring

Performance monitoring for soil will be conducted during remedial excavation activities and will be used to direct advancement of the excavation. Soil samples will be collected directly from the sidewalls and/or bottom of the remedial excavation using either stainless steel or plastic sampling tools. Soil samples collected at depths of less than 4 feet bgs will be collected manually. Samples collected at depths below 4 feet bgs will be collected with the backhoe bucket unless engineering controls are in place that allow for manual sample collection at depths greater than 4 feet bgs. Non-dedicated sampling equipment will be decontaminated between uses. The analytical results will be used to assess when the points of compliance for soil have been achieved.



5.3 Confirmational Monitoring - Soil

Confirmational monitoring for soil will be conducted after completion of the excavation to assess the concentrations of COCs in subsurface soil, to verify compliance with applicable cleanup standards, and to confirm the long-term effectiveness of the cleanup action.

Soil samples will be collected from the bottom and the sidewalls of the excavation to an estimated depth of 11 feet bgs. At a minimum, a sample will be taken every 5 vertical feet and 20 linear feet of sidewall, with a bottom sample for every 100 square feet of excavation floor.

Soil samples collected from each excavation area will be analyzed by an Ecology accredited laboratory for their respective COCs listed in Section 3.1.

5.4 Confirmational Monitoring - Groundwater

Upon completion of the source removal effort, groundwater monitoring wells will be utilized to monitor the effectiveness of the remedial action.

Two wells are proposed in the vicinity of the existing AST housing, two well are proposed in the maintenance shop area, and one well is proposed at the Snohomish Marine building, which is supplemental to monitoring wells MW-2 and MW-4 which will remain during and after excavation activities.

Groundwater samples will be collected quarterly from these monitoring wells until either four consecutive quarters show concentrations of COCs below their respective cleanup levels, or two consecutive quarters with no detectable concentrations of Site specific COCs.

Groundwater sampling protocol will be in accordance with American Society of Testing and Materials (ASTM) Guideline D6771-02 "Standard Practice for Low-Flow Purging and Sampling for Wells and Devices Used for Ground-Water Quality Investigations".

Dixon ES will follow the procedures described below when collecting groundwater samples:

- The caps from the monitoring wells will be removed and the groundwater level will be allowed to equilibrate to atmospheric pressure for a minimum of 20 minutes.
- The depth to groundwater in the monitoring wells will be measured relative to the top of the well casings using an electronic water-level meter.
- Each monitoring well will be purged at a low-flow rate (100 to 300 milliliters per minute) using a peristaltic pump and dedicated polyethylene tubing. Temperature, pH, DO, turbidity, and specific conductivity will be monitored during purging using a water quality meter to determine when these parameters stabilize.



- Samples will be collected in new laboratory-provided analyte-specific sample containers and assigned a unique sample ID. The samples will be placed in a climate-controlled container and maintained at or below 4° Celsius until they are delivered to an Ecology Accredited Laboratory under industry standard chain of custody protocol.
- Samples collected from each area of concern will be analyzed for their respective COCs listed in Section 3.1.

6.0 Closing

Dixon ES has completed this Remedial Investigation Summary / Cleanup Action Plan pursuant to WAC 173-340 for the petroleum releases that have been documented at the Dagmars Marina Property. Given the current understanding of the conceptual site model, full source removal and attenuation of residual contamination in groundwater appears to be the most appropriate and permanent remedial alternative for the Site.

As discussed in Section 1, this report was prepared for submittal to Ecology under the Expedited Voluntary Cleanup Program. Within this program, we are requesting an opinion on the proposed cleanup action, with the eventual goal of receiving a Determination of No Further Action.

7.0 References

Apex. 2023a. Remedial Investigation Report, Dagmars Marina. March 17.

Apex. 2023b. Supplemental Remedial Investigation Report, Dagmars Marina. November 1.

Figures



DIXON
ENVIRONMENTAL SERVICES

LEGEND



SUBJECT PROPERTY

TOPOGRAPHIC MAP


PROJECT ADDRESS:

**1871 ROSS AVENUE
EVERETT, WA 98201**

PAGE:

1 OF 5



 <p>DIXON ENVIRONMENTAL SERVICES</p>	<p>LEGEND</p> <p>--- PROPERTY BOUNDARY</p>	<p>SITE PLAN</p>	
		<p>PROJECT ADDRESS:</p> <p>1871 ROSS AVENUE EVERETT, WA 98201</p>	<p>PAGE:</p> <p>2 OF 5</p>



LEGEND

- ⊕ SOIL BORING
- APPROXIMATE AREA OF PETROLEUM CONTAMINATED SOIL

AST AREA

PROJECT ADDRESS:
1871 ROSS AVENUE
EVERETT, WA 98201




PAGE:

3 OF 5



DIXON
ENVIRONMENTAL SERVICES

LEGEND

-  SOIL BORING
-  MONITORING WELL
-  APPROXIMATE AREA OF PETROLEUM CONTAMINATED SOIL

MAINTENANCE SHOP




PROJECT ADDRESS:
1871 ROSS AVENUE
EVERETT, WA 98201

PAGE:

4 OF 5



LEGEND

-  SOIL BORING
-  MONITORING WELL
-  APPROXIMATE AREA OF PETROLEUM CONTAMINATED SOIL

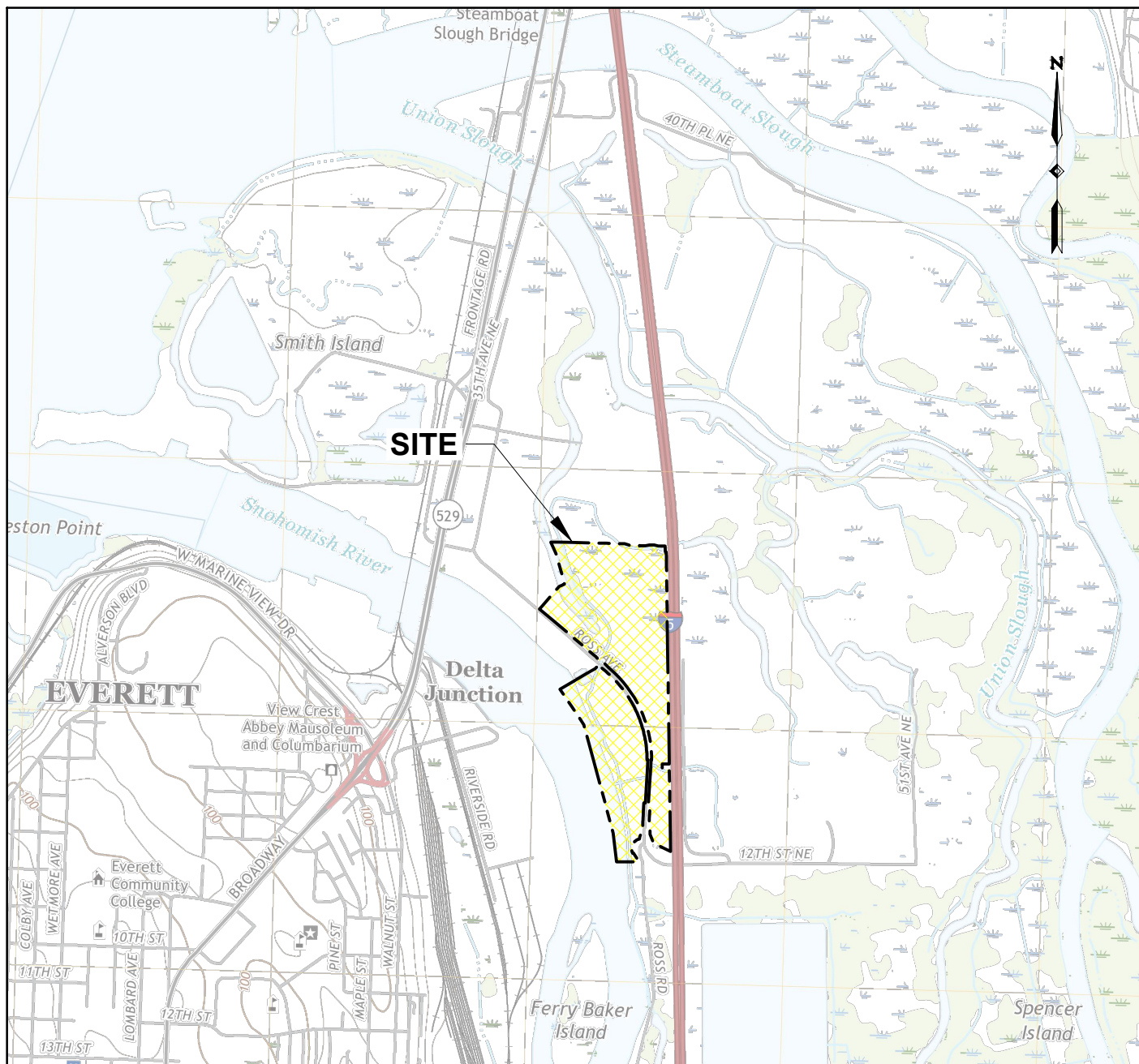
SNOHOMISH MARINE

PROJECT ADDRESS:
1871 ROSS AVENUE
EVERETT, WA 98201

PAGE:

5 OF 5

Appendix A: Apex RI Reference Documents



Marysville, Washington

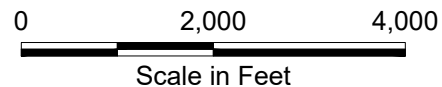
United States Geological Survey

7.5 Minute Series Topographic Map

Contour Interval: 20 feet

Scale: 1 inch = 24,000 feet

Date: 2020



WASHINGTON

Site Location Map

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington



Apex Companies, LLC
801 NW 42nd Street, #204
Seattle, Washington 98107

Project Number:
32-22012832

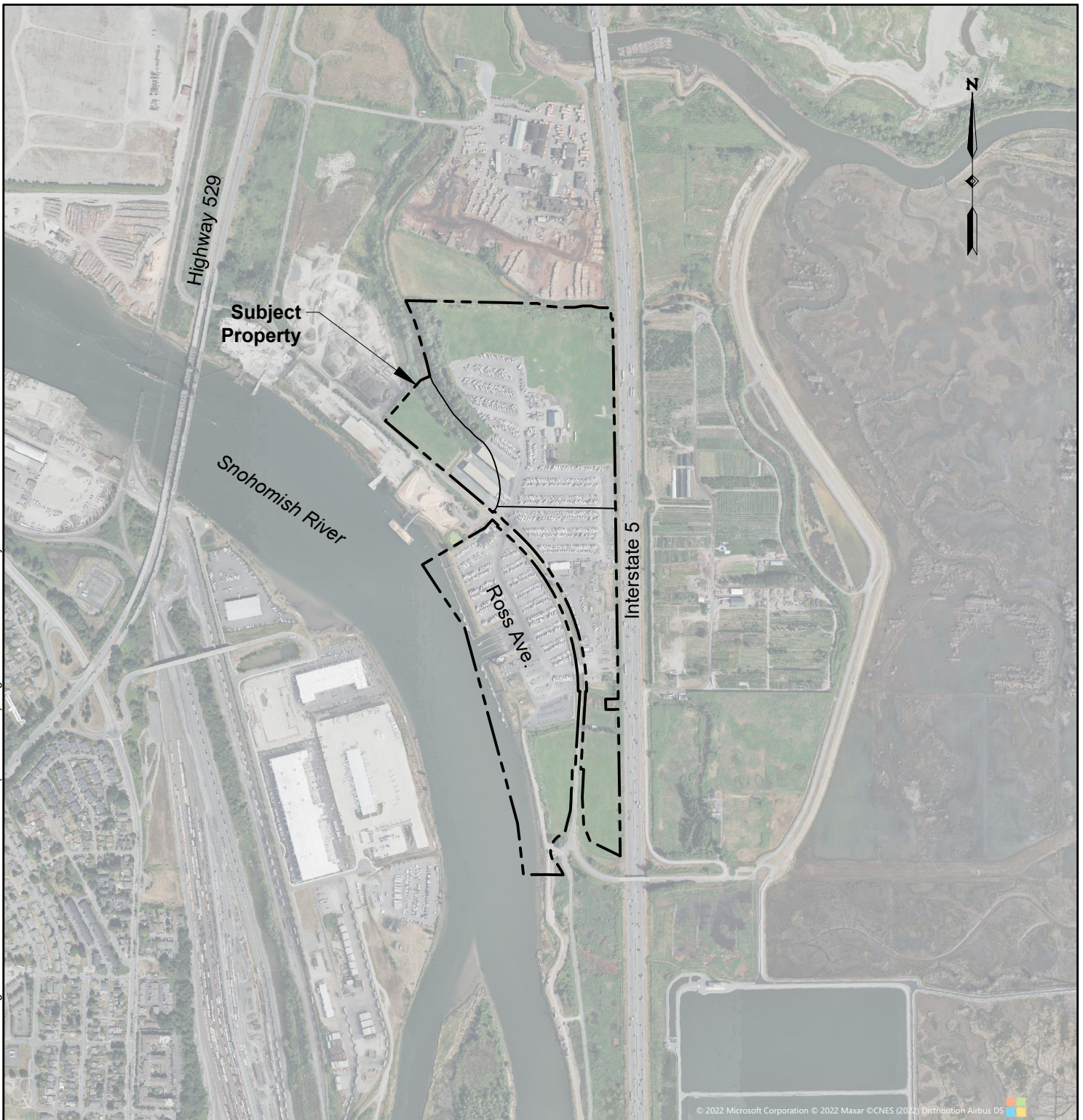
Drawn:
JP

Approved:
AU

March 2023

Figure
1

I:\Client\Alterra Property Group LLC\32-22008149 1871 Ross Ave\Remedial Investigation\ALT021-0313032-22008149 02-12 (Site Plans R).dwg Modified 2/21/2023 by JPoore




NOTE: Base map prepared from Microsoft Bing imagery (2022).
Parcel information from Snohomish County
(<ftp://ftp.snoco.org/assessor>).

0 1,000 2,000
Scale in Feet

Site Vicinity Plan

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

 Apex Companies, LLC
801 NW 42nd Street, #204
Seattle, Washington 98107

Project Number: 32-22012832	Drawn: JP	Approved: AU
March 2023		

Figure
2

I:\Client\Alterra Property Group LLC\32-22008149 1871 Ross Ave\Remedial Investigation\ALT021-0313032-22008149 02-12 (Site Plans R).dwg Modified 2/21/2023 by JPoore




Legend:

 Monitoring Well Location

NOTE: Base map prepared from Microsoft Bing imagery (2022). Parcel information from Snohomish County ([ftp://ftp.snoco.org/assessor](http://ftp.snoco.org/assessor)).

Site Layout

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

 Apex Companies, LLC
801 NW 42nd Street, #204
Seattle, Washington 98107

Project Number: 32-22012832	Drawn: JP	Approved: AU
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March 2023

Figure
3

I:\Client\Alterra Property Group LLC\32-22008149 1871 Ross Ave\Remedial Investigation\ALT021-0313032-22008149 02-12 (Site Plans R).dwg Modified 2/21/2023 by JPoore




Legend:

-  Monitoring Well Location
-  Soil Boring Location (Phase II)
-  Soil Boring Location (Remedial Investigation)
-  Drainage Sediment Location

0 300 600
Scale in Feet

Site Layout (North Side)

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

 Apex Companies, LLC
801 NW 42nd Street, #204
APEX Seattle, Washington 98107

Project Number: 32-22012832	Drawn: JP	Approved: AU
March 2023		

Figure
4

NOTE: Base map prepared from Microsoft Bing imagery (2022). Parcel information from Snohomish County (<ftp://ftp.snoco.org/assessor>).

I:\Client\Alterra Property Group LLC\32-22008149 1871 Ross Ave\Remedial Investigation\ALT021-0313032-22008149 02-12 (Site Plans R).dwg Modified 3/15/2023 by JPoore

Freshwater Sediment Management Standards (Benthic) Cleanup Screening Level in Milligrams per Kilogram (mg/kg)		
DRO	Diesel-Range Organics	510
RRO	Residual-Range Organics	4,400
tPAHs	Total Polycyclic Aromatic Hydrocarbons	30
As	Arsenic	120
Cr	Chromium	88
Ni	Nickel	110

OUTFALL-6	
9/14/2022	
DRO	5.79
RRO	16.7
tPAHs	<0.00609
As	13.7
Cr	57.9
Ni	40.0

OUTFALL-12	
9/14/2022	
DRO	<2.04
RRO	<5.11
tPAHs	<0.00690
As	12.7
Cr	42.5
Ni	40.7

OUTFALL-13	
9/14/2022	
DRO	12.5
RRO	82.0
tPAHs	<0.0125
As	13.6
Cr	44.4
Ni	38.4

OUTFALL-11	
9/14/2022	
DRO	<1.97
RRO	<4.92
tPAHs	<0.00664
As	6.06
Cr	17.2
Ni	17.8

OUTFALL-4	
9/14/2022	
DRO	<3.09
RRO	19.9
tPAHs	<0.0104
As	21.6
Cr	65.3
Ni	60.3

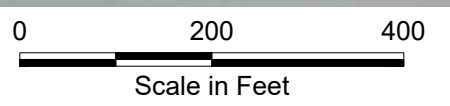
OUTFALL-3	
9/14/2022	
DRO	<3.04
RRO	<7.61
tPAHs	<0.0103
As	11.5
Cr	78.4
Ni	65.2

OUTFALL-2	
9/14/2022	
DRO	<2.41
RRO	<6.03
tPAHs	<0.00812
As	18.1
Cr	68.3
Ni	62.5

OUTFALL-1	
9/14/2022	
DRO	<2.62
RRO	12.0
tPAHs	<0.00886
As	10.6
Cr	47.8
Ni	45.5

OUTFALL-5	
9/14/2022	
DRO	<2.36
RRO	<5.92
tPAHs	<0.00798
As	13.2
Cr	55.8
Ni	49.8

OUTFALL-14
(French Drain)



Legend:

- Drainage Sediment Location
- Approximate Drain Line and Direction
- Approximate Catch Basin Location

Sample Identification: **OUTFALL-1**

9/14/2022		Date Sampled
DRO	<2.62	
RRO	12.0	Concentration in mg/kg (Bold Indicates Result Above Detection Limit)
tPAHs	<0.00886	
As	10.6	
Cr	47.8	
Ni	45.5	

NOTE: Base map prepared from Microsoft Bing imagery (2022). Parcel information from Snohomish County ([ftp://ftp.snoco.org/assessor](http://ftp.snoco.org/assessor)).

Southern Area of Site: Drainage Sediment Results

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

I:\Client\Alterra Property Group LLC\32-22008149 1871 Ross Ave\Remedial Investigation\ALT021-0313032-22008149 02-12 (Site Plans R1).dwg Modified 3/15/2023 by JPoore

Freshwater Sediment Management Standards (Benthic) Cleanup Screening Level in Milligrams per Kilogram (mg/kg)		
DRO	Diesel-Range Organics	510
RRO	Residual-Range Organics	4,400
tPAHs	Total Polycyclic Aromatic Hydrocarbons	30
As	Arsenic	120
Cr	Chromium	88
Ni	Nickel	110

SLOUGH-1	
9/14/2022	
DRO	7.79
RRO	20.7
tPAHs	0.0306
As	21.7
Cr	43.3
Ni	48.4

SLOUGH-2	
9/14/2022	
DRO	8.31
RRO	24.7
tPAHs	0.0135
As	22.9
Cr	48.0
Ni	56.2

OUTFALL-8	
9/14/2022	
DRO	16.5
RRO	105
tPAHs	0.0605
As	18.0
Cr	64.6
Ni	42.4

OUTFALL-9	
9/14/2022	
DRO	21.7
RRO	95.8
tPAHs	0.345
As	18.8
Cr	26.8
Ni	31.4




SLOUGH-3	
9/14/2022	
DRO	7.64
RRO	25.9
tPAHs	0.0184
As	19.5
Cr	39.3
Ni	47.6

SLOUGH-4	
9/14/2022	
DRO	6.37
RRO	21.1
tPAHs	0.0330
As	15.9
Cr	53.7
Ni	58.5

OUTFALL-7	
9/14/2022	
DRO	16.9
RRO	125
tPAHs	0.0372
As	5.94
Cr	23.0
Ni	23.9

OUTFALL-10
(French Drain)

Legend:

-  Drainage Sediment Location
-  Approximate Drain Line and Direction
-  Approximate Catch Basin Location


Sample Identification	SLOUGH-1		
	9/14/2022		Date Sampled
Analyte Sampled	DRO	7.79	Concentration in mg/kg (Bold Indicates Result Above Detection Limit)
	RRO	20.7	
	tPAHs	0.0306	
	As	21.7	
	Cr	43.3	
	Ni	48.4	

NOTE: Base map prepared from Microsoft Bing imagery (2022). Parcel information from Snohomish County ([ftp://ftp.snoco.org/assessor](http://ftp.snoco.org/assessor)).

0 200 400
Scale in Feet

Northern Area of Site: Drainage Sediment Results

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

 Apex Companies, LLC
801 NW 42nd Street, #204
Seattle, Washington 98107

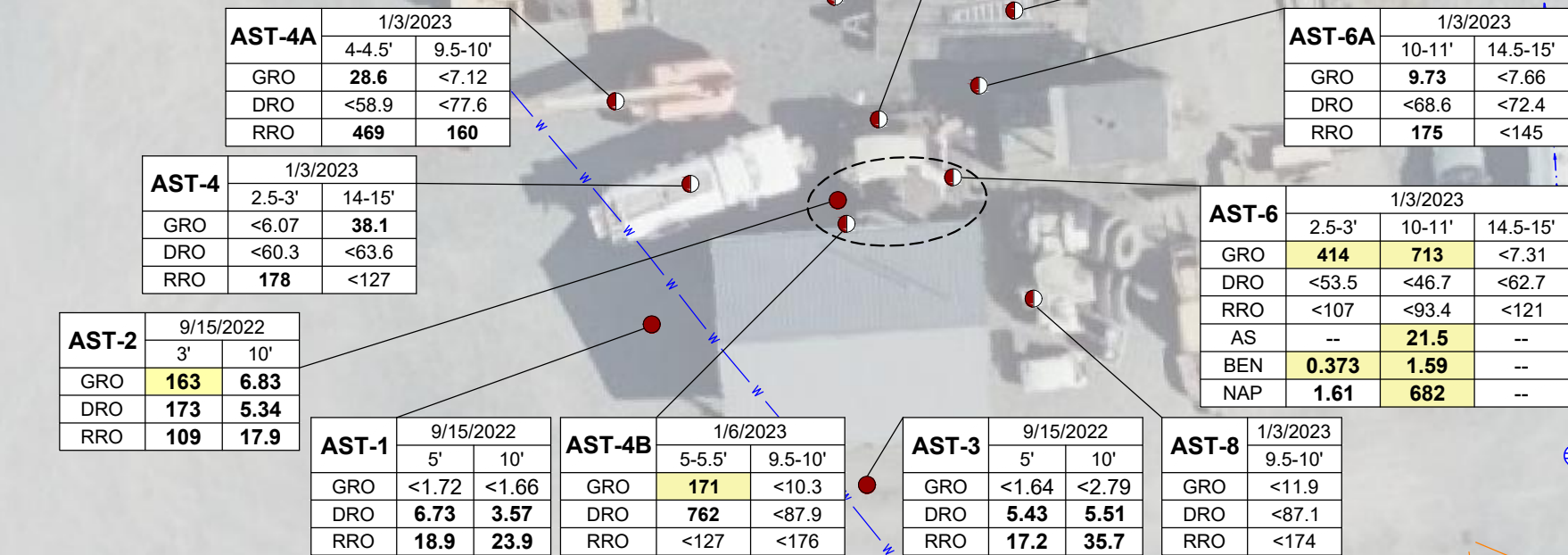
Project Number: 32-22012832	Drawn: JP	Approved: AU
March 2023		

Figure
6

I:\Client\Alterra Property Group LLC\32-22008\149 1871 Ross Ave\Remedial Investigation\ALT021-0313032-22008\149 02-12 (Site Plans RI).dwg Modified 2/21/2023 by JPoore

Soil MTCA Method A Cleanup Level in Milligrams per Kilogram (mg/kg)		
GRO	Gasoline-Range Organics	30/100 ¹
DRO	Diesel-Range Organics	2,000
RRO	Residual-Range Organics	2,000
AS	Arsenic	20
BEN	Benzene	0.03
NAP	Naphthalene	5

¹ The MTCA Method A Cleanup Level for TPH as gasoline-range organics is 30 mg/kg when benzene is detected, and 100 mg/kg when benzene is not detected.



Legend:

- Monitoring Well Location
- Soil Boring Location (Phase II)
- Soil Boring Location (Remedial Investigation)

Sample Identification	AST-4B	1/6/2023		Date Sampled
		5-5.5'		Depth of Sample
Analyte Sampled		GRO	171	Detected Concentration in µg/L (Bold Indicates Result Above Detection Limit) (Highlight = Cleanup Level Exceedance)
		DRO	762	
		RRO	<127	

- Approximate Drain Line and Direction
- Approximate Storm Drain Line
- Approximate Water Line

Area of Contamination over MTCA Method A Cleanup Levels

0 20 40
Scale in Feet

Soil Results (AST Area)

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

Apex Companies, LLC
801 NW 42nd Street, #204
Seattle, Washington 98107

Project Number: 32-22012832	Drawn: JP	Approved: AU	Figure 7
March 2023			

NOTE: Base map prepared from Microsoft Bing imagery (2022). Parcel information from Snohomish County (<ftp://ftp.snoco.org/assessor>).

I:\Client\Alterra Property Group LLC\32-22008149 1871 Ross Ave\Remedial Investigation\ALT021-0313032-22008149 02-12 (Site Plans RI).dwg Modified 2/21/2023 by JPoor

Soil MTCA Method A Cleanup Level in Milligrams per Kilogram (mg/kg)		
GRO	Gasoline-Range Organics	30/100 ¹
DRO	Diesel-Range Organics	2,000
RRO	Residual-Range Organics	2,000
¹ The MTCA Method A Cleanup Level for TPH as gasoline-range organics is 30 mg/kg when benzene is detected, and 100 mg/kg when benzene is not detected.		

Groundwater MTCA Method A Cleanup Level in Micrograms per Liter (µg/L)		
GRO	Gasoline-Range Organics	800/1,000 ¹
DRO	Diesel-Range Organics	500
RRO	Residual-Range Organics	500
¹ The MTCA Method A Cleanup Level for TPH as gasoline-range organics is 800 µg/L when benzene is detected, and 1,000 µg/L when benzene is not detected.		

Soil (mg/kg)	SHOP-4A	1/4/2023
		9.5-10'
	GRO	<7.28
	DRO	<63.3
	RRO	<127

Soil (mg/kg)	SHOP-4B	1/6/2023
		13-14" 19-20"
	DRO	<70.5 <63.6
	RRO	<141 <127

Soil (mg/kg)	SHOP-3	1/3/2023
		9.5-10'
	GRO	<9.56
	DRO	<74.1
	RRO	203

Soil (mg/kg)	SHOP-5	1/4/2023
		9.5-10'
	GRO	<8.62
	DRO	<69.1
	RRO	<138

Soil (mg/kg)	SHOP-2	9/15/2022
		2.5' 5'
	DRO	2,720 2.41
	RRO	4,380 <5.03

Soil (mg/kg)	SHOP-1	9/15/2022
		2.5' 5'
	DRO	3.56 2.26
	RRO	8.49 <5.23

Soil (mg/kg)	SHOP-4	1/3/2023
		2.5-3' 5-6' 9.5-10'
	GRO	475 176 <10.4
	DRO	141 <61.9 <80.0
	RRO	481 712 <160

Groundwater (µg/L)	SHOP-4GW*	1/3/2023
	DRO	1,730
	RRO	<98.4
	*SHOP-4GW sample was collected via temporary well from soil boring SHOP-4.	
Groundwater (µg/L)	MW-5	1/26/2023
	GRO	<50.0
	DRO	345
	RRO	<94.1

Legend:

- Monitoring Well Location
- Soil Boring Location (Phase II)
- Soil Boring Location (Remedial Investigation)

Sample Identification	Soil (mg/kg)	SHOP-4	1/3/2022	Date Sampled
			2.5-3'	Depth of Sample (Soil Results Only)
Result Type		GRO	475	Detected Concentration in µg/L (Bold Indicates Result Above Detection Limit) (Highlight = Cleanup Level Exceedance)
		DRO	141	
Analyte Sampled		RRO	481	

- Approximate Drain Line and Direction
- Approximate Storm Drain Line
- Approximate Water Line

- Area of Contamination over MTCA Method A Cleanup Levels

NOTE: Base map prepared from Microsoft Bing Imagery (2022). Parcel information from Snohomish County (<ftp://ftp.snoco.org/assessor>).

Soil and Groundwater Results (Maintenance Shop)

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

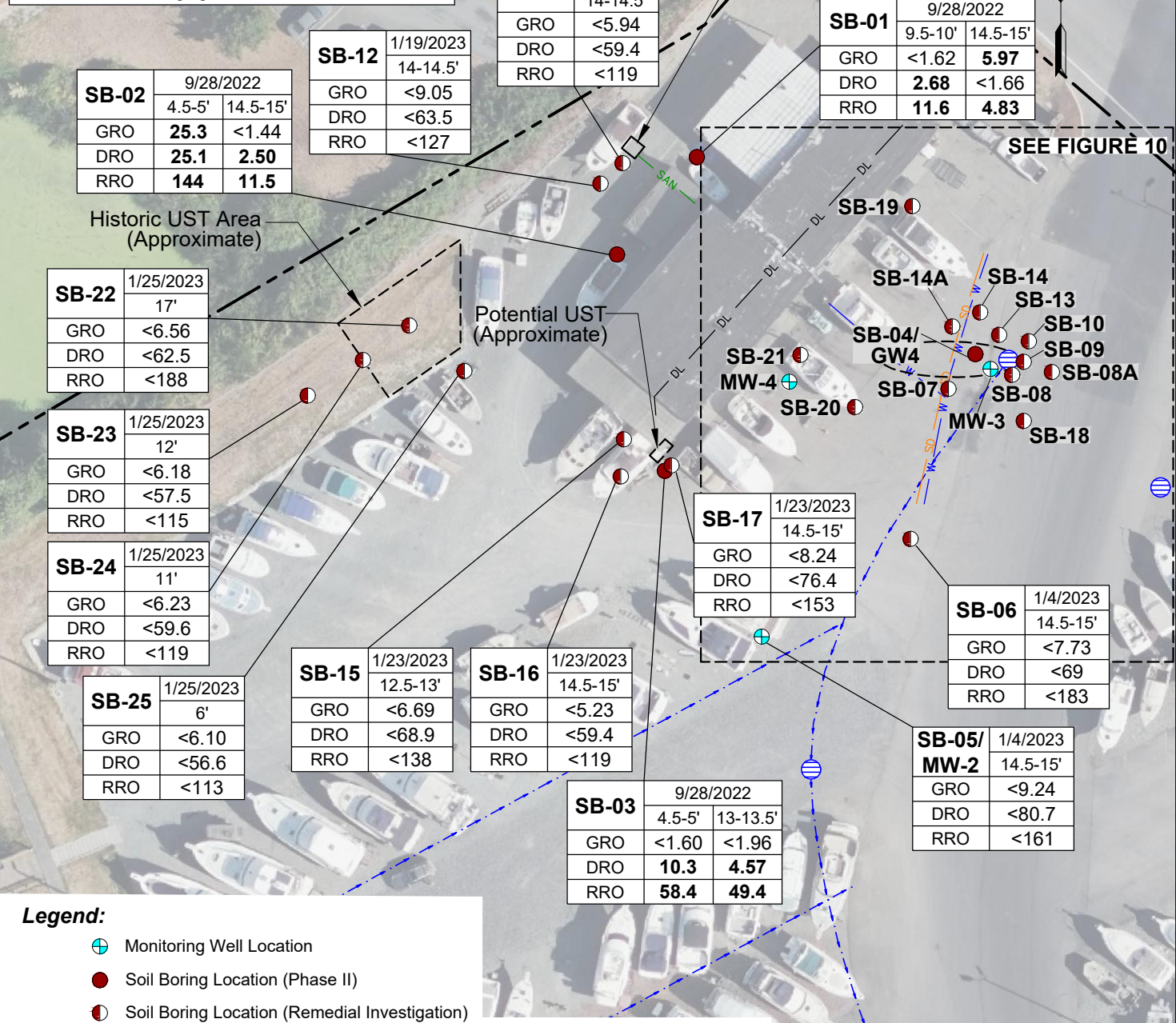
Apex Companies, LLC
801 NW 42nd Street, #204
Seattle, Washington 98107

Project Number: 32-22012832	Drawn: JP	Approved: AU	Figure 8
March 2023			

0 20 40
Scale in Feet

I:\Client\Alterra Property Group LLC\32-22008149 1871 Ross Ave\Remedial Investigation\ALT021-0313032-22008149 02-12 (Site Plans R).dwg Modified 2/21/2023 by JPoore

Soil MTCA Method A Cleanup Level in Milligrams per Kilogram (mg/kg)		
GRO	Gasoline-Range Organics	30/100 ¹
DRO	Diesel-Range Organics	2,000
RRO	Residual-Range Organics	2,000
¹ The MTCA Method A Cleanup Level for TPH as gasoline-range organics is 30 mg/kg when benzene is detected, and 100 mg/kg when benzene is not detected.		



NOTE: Base map prepared from Microsoft Bing imagery (2022). Parcel information from Snohomish County ([ftp://ftp.snoco.org/assessor](http://ftp.snoco.org/assessor)).

Soil Results (Snohomish Marine)

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

Apex Companies, LLC
801 NW 42nd Street, #204
Seattle, Washington 98107


Project Number: 32-22012832
March 2023

Drawn: JP
Approved: AU

Figure 9

Soil MTCA Method A Cleanup Level in Milligrams per Kilogram (mg/kg)		
GRO	Gasoline-Range Organics	30/100 ¹
DRO	Diesel-Range Organics	2,000
RRO	Residual-Range Organics	2,000

¹ The MTCA Method A Cleanup Level for TPH as gasoline-range organics is 30 mg/kg when benzene is detected, and 100 mg/kg when benzene is not detected.

 APEX	Apex Companies, LLC 801 NW 42nd Street, #204 Seattle, Washington 98107	Project Number:	Drawn:	Approved:	Figure 10
		32-22012832	JP	AU	
		March 2023			

**Soil Puget Sound Natural Background Concentration
in Milligrams per Kilogram (mg/kg)**

AS	Arsenic	7
----	---------	---

**Soil MTCA Method A Cleanup Level in
Milligrams per Kilogram (mg/kg)**

AS	Arsenic	20
TOC	Total Organic Carbon	--

**Groundwater MTCA Method A Cleanup Level in
Micrograms per Liter (µg/L)**

Arsenic	5
---------	---

Soil (mg/kg)	ARS-2	1/6/2023				
		0-5'	5.5-12'	12-15'	15-17'	17-20'
AS		4.45	5.93	10.3	9.53	11.4
TOC		<0.150	0.259	1.35	3.19	3.25

Soil (mg/kg)	ARS-4	1/10/2023
		10-15'
AS		10.5
TOC		4.73

Soil (mg/kg)	MW-1	9/15/2022
		10'
Arsenic		19.1
Groundwater (µg/L)	MW-1	10/6/2022
		Arsenic (Field Filtered)
		20.4
Groundwater (µg/L)	MW-1	Arsenic (Unfiltered)
		14.7

Soil (mg/kg)	ARS-3	1/6/2023			
		0-4'	4-9'	9-14'	14-20'
AS		2.33	10.2	9.23	7.50
TOC		0.279	2.65	7.25	1.44

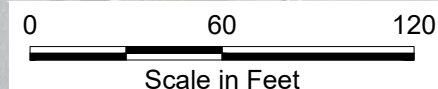
Soil (mg/kg)	ARS-1	1/6/2023	
		0-3'	3-6'
AS		4.03	8.89
TOC		0.214	1.76

Legend:

- Monitoring Well Location
- Historic 2008 Sample Location
- Soil Boring Location (Remedial Investigation)

Sample Identification	Result Type	Analyte Sampled	Date Sampled	Depth of Sample (Soil Results Only)	Detected Concentration (Bold Indicates Result Above Detection Limit) (Highlight = Cleanup Level Exceedance)
Soil (mg/kg)	MW-1	Arsenic	9/15/2022	10'	19.1

NOTE: Base map prepared from Microsoft Bing imagery (2022). Parcel information from Snohomish County ([ftp://ftp.snoco.org/assessor](http://ftp.snoco.org/assessor)).



**Soil and Groundwater Results
(Arsenic Area)**

Remedial Investigation

Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

Apex Companies, LLC
801 NW 42nd Street, #204
APEX Seattle, Washington 98107

Project Number: 32-22012832
March 2023
Drawn: JP
Approved: AU
Figure 11

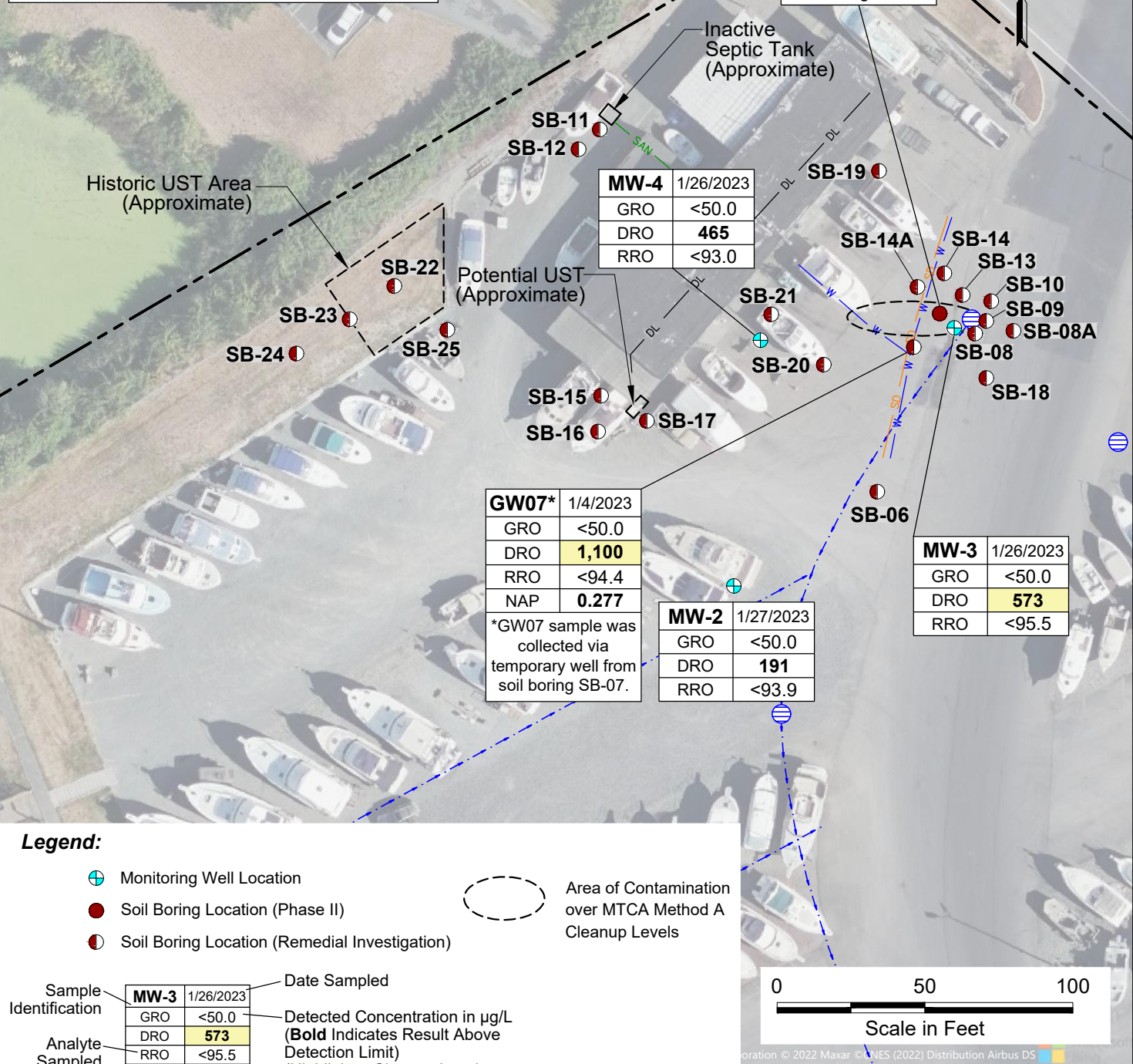
I:\Client\Alterra Property Group LLC\32-22008149 1871 Ross Ave\Remedial Investigation\ALT021-0313032-22008149 02-12 (Site Plans R).dwg Modified 2/21/2023 by JPoore

Groundwater MTCA Method A Cleanup Level in Micrograms per Liter (µg/L)		
GRO	Gasoline-Range Organics	800/1,000 ¹
DRO	Diesel-Range Organics	500
RRO	Residual-Range Organics	500
NAP	Naphthalene	5

¹ The MTCA Method A Cleanup Level for TPH as gasoline-range organics is 800 µg/L when benzene is detected, and 1,000 µg/L when benzene is not detected.

GW4*	9/28/2022
GRO	180
DRO	15,400
RRO	74,100
BEN	32.3

*GW4 sample was collected via temporary well from soil boring SB-04.



Groundwater Results (Snohomish Marine)

Remedial Investigation
Dagmars Marina Facility - 1871 Ross Avenue
Everett, Washington

Apex Companies, LLC
801 NW 42nd Street, #204
Seattle, Washington 98107

Project Number:	32-22012832	Drawn:	JP	Approved:	AU
March 2023					

Figure **12**

NOTE: Base map prepared from Microsoft Bing imagery (2022). Parcel information from Snohomish County (<ftp://ftp.snoco.org/assessor>).

Table 1 - Drainage Sediment Results: TPH, PCBs, and PAHs
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	OUTFALL-1	OUTFALL-2	OUTFALL-3	OUTFALL-4	OUTFALL-5	OUTFALL-6	OUTFALL-7	OUTFALL-8	OUTFALL-9	Freshwater Sediment Management Standards (Benthic)		
Date:	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/27/2022	09/27/2022	09/27/2022	09/14/2022	Cleanup Screening Level	Sediment Cleanup Objective	
Total Petroleum Hydrocarbons (TPH) by NWTPH in mg/kg												
Diesel Range Organics	<2.62	<2.41	<3.04	<3.09	<2.36	5.79	16.9	16.5	21.7	510	340	
Residual Range Organics	12.0 J	<6.03	<7.61	19.9 J	<5.92	16.7	125	105	95.8	4,400	3,600	
Polychlorinated Biphenyls (PCBs) by EPA Method 8082A in mg/kg												
Aroclor 1016	<0.0233	<0.0214	<0.0270	<0.0274	<0.0210	<0.0160	<0.0121	<0.0170	<0.0173	--	--	
Aroclor 1221	<0.0233	<0.0214	<0.0270	<0.0274	<0.0210	<0.0160	<0.0121	<0.0170	<0.0173	--	--	
Aroclor 1232	<0.0233	<0.0214	<0.0270	<0.0274	<0.0210	<0.0160	<0.0121	<0.0170	<0.0173	--	--	
Aroclor 1242	<0.0233	<0.0214	<0.0270	<0.0274	<0.0210	<0.0160	<0.0121	<0.0170	<0.0173	--	--	
Aroclor 1248	<0.0146	<0.0134	<0.0169	<0.0172	<0.0131	<0.0100	<0.00757	<0.0107	<0.0108	--	--	
Aroclor 1254	<0.0146	<0.0134	<0.0169	<0.0172	<0.0131	<0.0100	<0.00757	<0.0107	<0.0108	--	--	
Aroclor 1260	<0.0146	<0.0134	<0.0169	<0.0172	<0.0131	<0.0100	<0.00757	<0.0107	<0.0108	--	--	
Total PCBs	<0.0233	<0.0214	<0.0270	<0.0274	<0.0210	<0.0160	<0.0121	<0.0170	<0.0173	2.5	0.11	
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270E-SIM in mg/kg												
Anthracene	<0.00454	<0.00416	<0.00526	<0.00535	<0.00409	<0.00312	<0.00236	<0.00332	0.00495 J	--	--	
Acenaphthene	<0.00412	<0.00378	<0.00478	<0.00486	<0.00372	<0.00284	<0.00215	<0.00302	0.0141	--	--	
Acenaphthylene	<0.00426	<0.00391	<0.00494	<0.00502	<0.00384	<0.00293	<0.00222	<0.00312	0.0219	--	--	
Benzo(a)anthracene	<0.00341	<0.00313	<0.00396	<0.00402	<0.00308	<0.00235	0.00262 J	<0.00250	0.0133	--	--	
Benzo(a)pyrene	<0.00353	<0.00324	<0.00409	<0.00416	<0.00318	<0.00243	0.00341 J	<0.00259	0.0236	--	--	
Benzo(b)fluoranthene	<0.00302	<0.00277	<0.00350	<0.00356	<0.00272	<0.00208	0.0057 J	0.00615 J	0.0335	--	--	
Benzo(g,h,i)perylene	<0.00349	<0.00320	<0.00405	<0.00412	<0.00315	<0.00240	0.00413 J	0.00422 J	0.0349	--	--	
Benzo(k)fluoranthene	<0.00424	<0.00389	<0.00492	<0.00500	<0.00382	<0.00292	<0.00221	<0.00311	0.00666 J	--	--	
Chrysene	<0.00458	<0.00420	<0.00530	<0.00540	<0.00412	<0.00315	0.00335 J	0.00404 J	0.0175	--	--	
Dibenz(a,h)anthracene	<0.00339	<0.00311	<0.00393	<0.00400	<0.00306	<0.00233	<0.00177	<0.00248	0.0091	--	--	
Fluoranthene	<0.00448	<0.00411	<0.00519	<0.00528	<0.00404	<0.00308	0.00604 J	0.0126	0.0338	--	--	
Fluorene	<0.00404	<0.00371	<0.00469	<0.00477	<0.00364	<0.00278	<0.00210	<0.00296	0.0188	--	--	
Indeno(1,2,3-cd)pyrene	<0.00357	<0.00328	<0.00414	<0.00421	<0.00322	<0.00246	0.0032 J	0.00371 J	0.0157	--	--	
Naphthalene	<0.00805	<0.00738	<0.00933	<0.00949	<0.00725	<0.00553	<0.00419	0.0108 J	0.0358 J+	--	--	
Phenanthrene	<0.00456	<0.00418	<0.00528	<0.00537	<0.00411	<0.00313	0.00301 J	0.0127	0.0213 J+	--	--	
Pyrene	<0.00395	<0.00362	<0.00457	<0.00465	<0.00356	<0.00271	0.00569 J	0.00628 J	0.0401	--	--	
1-Methylnaphthalene	<0.00886	<0.00812	<0.0103	<0.0104	<0.00798	<0.00609	<0.00461	<0.00648	0.0348	--	--	
2-Methylnaphthalene	<0.00842	<0.00773	<0.00976	<0.00993	<0.00759	<0.00579	<0.00438	<0.00617	<0.00627	--	--	
2-Chloronaphthalene	<0.00919	<0.00843	<0.0107	<0.0108	<0.00828	<0.00632	<0.00478	<0.00673	<0.00684	--	--	
Total PAHs	<0.00886	<0.00812	<0.0103	<0.0104	<0.00798	<0.00609	0.0372 J	0.0605	0.345	30	17	

See Notes at the End of Table

Table 1 - Drainage Sediment Results: TPH, PCBs, and PAHs
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	OUTFALL-11	OUTFALL-12	OUTFALL-13	SLOUGH-1	SLOUGH-2	SLOUGH-3	SLOUGH-4	Freshwater Sediment Management Standards (Benthic)	
Date:	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022	Cleanup Screening Level	Sediment Cleanup Objective
Total Petroleum Hydrocarbons (TPH) by NWTPH in mg/kg									
Diesel Range Organics	<1.97	<2.04	12.5	7.79 J	8.31 J	7.64 J	6.37 J	510	340
Residual Range Organics	<4.92	<5.11	82.0	20.7 J	24.7 J	25.9	21.1 J	4,400	3,600
Polychlorinated Biphenyls (PCBs) by EPA Method 8082A in mg/kg									
Aroclor 1016	<0.0174	<0.0181	<0.0329	<0.0270	<0.0299	<0.0288	<0.0271	--	--
Aroclor 1221	<0.0174	<0.0181	<0.0329	<0.0270	<0.0299	<0.0288	<0.0271	--	--
Aroclor 1232	<0.0174	<0.0181	<0.0329	<0.0270	<0.0299	<0.0288	<0.0271	--	--
Aroclor 1242	<0.0174	<0.0181	<0.0329	<0.0270	<0.0299	<0.0288	<0.0271	--	--
Aroclor 1248	<0.0109	<0.0113	<0.0206	<0.0169	<0.0187	<0.0180	<0.0170	--	--
Aroclor 1254	<0.0109	<0.0113	<0.0206	<0.0169	<0.0187	<0.0180	<0.0170	--	--
Aroclor 1260	<0.0109	<0.0113	<0.0206	<0.0169	<0.0187	<0.0180	<0.0170	--	--
Total PCBs	<0.0174	<0.0181	<0.0329	<0.0270	<0.0299	<0.0288	<0.0271	2.5	0.11
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270E-SIM in mg/kg									
Anthracene	<0.00340	<0.00353	<0.00642	<0.00527	<0.00582	<0.00562	<0.00529	--	--
Acenaphthene	<0.00309	<0.00321	<0.00583	<0.00479	<0.00529	<0.00510	<0.00480	--	--
Acenaphthylene	<0.00319	<0.00332	<0.00603	<0.00495	<0.00547	<0.00527	<0.00496	--	--
Benzo(a)anthracene	<0.00256	<0.00266	<0.00483	<0.00397	<0.00438	<0.00422	<0.00398	--	--
Benzo(a)pyrene	<0.00265	<0.00275	<0.00499	<0.00410	<0.00453	<0.00437	0.00430 J	--	--
Benzo(b)fluoranthene	<0.00226	<0.00235	<0.00427	<0.00351	<0.00387	<0.00374	<0.00352	--	--
Benzo(g,h,i)perylene	<0.00262	<0.00272	<0.00494	<0.00406	<0.00448	<0.00432	<0.00407	--	--
Benzo(k)fluoranthene	<0.00318	<0.00330	<0.00600	<0.00493	<0.00544	<0.00525	<0.00494	--	--
Chrysene	<0.00343	<0.00356	<0.00647	<0.00532	<0.00588	<0.00566	<0.00533	--	--
Dibenz(a,h)anthracene	<0.00254	<0.00264	<0.00480	<0.00394	<0.00436	<0.00420	<0.00395	--	--
Fluoranthene	<0.00336	<0.00349	<0.00633	<0.00520	<0.00575	<0.00554	0.00747 J	--	--
Fluorene	<0.00303	<0.00315	<0.00572	<0.00470	<0.00519	<0.00501	<0.00471	--	--
Indeno(1,2,3-cd)pyrene	<0.00268	<0.00278	<0.00505	<0.00415	<0.00458	<0.00442	<0.00416	--	--
Naphthalene	<0.00603	<0.00627	<0.0114	0.0201 J	0.0135 J	0.0184 J	0.0138 J	--	--
Phenanthrene	<0.00341	<0.00355	<0.00644	0.00568 J	<0.00585	<0.00564	0.00692 J	--	--
Pyrene	<0.00296	<0.00307	<0.00558	0.00477 J	<0.00506	<0.00488	0.00802 J	--	--
1-Methylnaphthalene	<0.00664	<0.00690	<0.0125	<0.0103	<0.0114	<0.0110	<0.0103	--	--
2-Methylnaphthalene	<0.00631	<0.00656	<0.0119	<0.00979	<0.0108	<0.0104	<0.00981	--	--
2-Chloronaphthalene	<0.00689	<0.00716	<0.0130	<0.0107	<0.0118	<0.0114	<0.0107	--	--
Total PAHs	<0.00664	<0.00690	<0.0125	0.0306 J	0.0135 J	0.0184 J	0.0330 J	30	17

Notes:

1. mg/kg = Milligrams per kilogram.
2. Bold values indicate the compound was detected above method detection limits.
3. < = Analyte was not detected above the detection limit shown.
4. Sediment Management Standards from WAC 173-204 and Washington Ecology's *Sediment Cleanup User's Manual* (December 2019 update).
5. -- = Value not available.
6. J = Result is estimated.
7. J+ = Result is estimated and may be biased high.

Table 2 - Drainage Sediment Results: Metals
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	OUTFALL-1	OUTFALL-2	OUTFALL-3	OUTFALL-4	OUTFALL-5	OUTFALL-6	OUTFALL-7	OUTFALL-8	OUTFALL-9	OUTFALL-11	OUTFALL-12	OUTFALL-13	SLOUGH-1	SLOUGH-2	SLOUGH-3	SLOUGH-4	Puget Sound Natural Background Concentrations	Freshwater Sediment Management Standards (Benthic)	
Date:	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/27/2022	09/27/2022	09/27/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022	09/14/2022		Cleanup Screening Level	Sediment Cleanup Objective
Metals by EPA Method 6020B and 7471B in mg/kg																			
Arsenic	10.6	18.1	11.5	21.6	13.2	13.7	5.94	18.0	18.8	6.06	12.7	13.6	21.7	22.9	19.5	15.9	11	120	14
Barium	35.0	54.1	66.5	51.5	52.3	57.3	32.3	61.5	41.0	15.3	32.0	37.7	51.4	54.9	45.3	49.6	--	--	--
Cadmium	<0.169	<0.155	0.254 J	<0.199	<0.152	0.120 J	0.129 J	0.208 J	0.232 J	<0.126	<0.131	<0.238	0.307 J	0.334 J	0.322 J	0.358	0.8	5.4	2.1
Chromium	47.8	68.3	78.4	65.3	55.8	57.9	23.0	64.6	26.8	17.2	42.5	44.4	43.3	48.0	39.3	53.7	62	88	72
Copper	41.1	49.4	60.9	49.9	47.6	36.2	17.6	41.2	38.2	16.8	39.6	39.5	73.4	81.4	66.9	74.6	45	1200	400
Lead	6.41	8.28	9.44	7.57	7.03	10.4	27.6	22.6	8.98	2.62 J	6.58	10.2	20.0	22.0	20.3	21.5	21	1,300	360
Nickel	45.5	62.5	65.2	60.3	49.8	40.0	23.9	42.4	31.4	17.8	40.7	38.4	48.4	56.2	47.6	58.5	50	110	26
Selenium	0.479 J	0.953 J	0.872 J	0.619 J	0.613 J	0.570 J	<0.185	0.831 J	0.304 J	<0.266	0.626 J	0.732 J	0.780 J	0.932 J	0.710 J	0.686	--	20	11
Silver	<0.171	<0.157	<0.198	<0.201	<0.154	<0.117	<0.0888	<0.125	<0.127	<0.128	<0.133	<0.241	0.213 J	0.244 J	<0.211	0.220	0.24	1.7	0.57
Zinc	61.6	84.8	91.1	75.3	74.7	85.1	181	74.2	95.0	24.1 J	57.9	68.1 J	86.7	102	90.8	108	93	4,200	3200
Mercury	0.0664 J	<0.0326	<0.0412	0.0740 J	0.130	0.0693	0.0189 J	0.0859	<0.0264	0.0809	0.0361 J	0.0592 J	0.154	0.132	0.123	0.119	0.2	0.8	0.66

- Notes:
- 1. mg/kg = Milligrams per kilogram.
 - 2. Bold values indicate the compound was detected above method detection limits
 - 3. < = Analyte was not detected above the detection limit shown
 - 4. Shaded results exceed the Cleanup Screening Level and the natural background concentration.
 - 5. Natural Background Concentrations and Sediment Management Standards from WAC 173-204 and Washington Ecology's*Sediment Cleanup User's Manual* (December 2019 update).
 - 6. -- = Value not available.
 - 7. J = Result is estimated.

Table 3 - Drainage Sediment Results: Organochlorine Pesticides
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	Slough 1-4	Barn 2	Outfall 8	Freshwater Sediment Management Standards (Benthic)		MTCA Method B Cleanup Level
				Cleanup Screening Level	Sediment Cleanup Objective	
Date:	9/14/2022	10/6/2022	10/6/2022			
Organochlorine Pesticides by EPA Method 8081B in µg/kg						
Aldrin	<4.79	<2.58	<2.66 UJ	--	--	59
alpha-BHC	<4.79	<2.58	<2.66	--	--	160
beta-BHC	<10.3	<2.58	<2.66 UJ	11	7.2	560
delta-BHC	<5.99	<2.58	<2.66	--	--	--
gamma-BHC (Lindane)	<4.79	<2.58	<2.66 UJ	--	--	910
cis-Chlordane	<4.79	<2.58	<2.66	--	--	40,000
trans-Chlordane	<4.79	<2.58	<2.66	--	--	40,000
4,4'-DDD	<4.79	<2.84	<2.66	860	310	2,400
4,4'-DDE	<4.79	4.83	<2.66	33	21	2,900
4,4'-DDT	<4.79	4.38 J	<2.66	8,100	100	2,900
Dieldrin	<4.79	<2.58	<2.66	9.3	4.9	63
Endosulfan I	<4.79	<2.58	<2.66	--	--	--
Endosulfan II	<4.79	<2.58	<2.66	--	--	--
Endosulfan sulfate	<4.79	<2.58	<2.66 UJ	--	--	480,000
Endrin	<4.79	<2.58	<2.66	--	--	24,000
Endrin Aldehyde	<4.79	<2.58	<2.66	--	--	--
Endrin ketone	<4.79	<2.58	<2.66	>8.5	8.50	--
Heptachlor	<4.79	<2.58	<2.66 UJ	--	--	220
Heptachlor epoxide	<4.79	<2.58	<2.66	--	--	110
Methoxychlor	<14.4	<7.75	<7.97	--	--	400,000
Chlordane (Technical)	<144	<77.5	<79.7	--	--	2,900
Toxaphene (Total)	<144	<77.5	<79.7	--	--	910

Notes:

1. µg/kg = Micrograms per kilogram.
2. Bold values indicate the compound was detected above minimum reporting limits.
3. < = Analyte was not detected above the reporting limit shown.
4. Soil cleanup levels from the MTCA Method B 173-340 WAC (July 2022 update).
5. Sediment Management Standards from WAC 173-204 and Washington Ecology's *Sediment Cleanup User's Manual* (December 2019 update).
6. -- = Value not available.
7. J = Result is estimated.
8. UJ = The not detected result is estimated.

Table 4 - Drainage Sediment Results: Organophosphorus Pesticides
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	Slough 1-4	Barn 2	Outfall 8	MTCA Method B
Date:	9/14/2022	10/6/2022	10/6/2022	Cleanup Level
<i>Organophosphorus Pesticides by EPA Method 8270E in µg/kg</i>				
Azinphos methyl (Guthion)	<1180	<66.2	<63.5	--
Chlorpyrifos	<118	<66.2	<63.5	80,000
Coumaphos	<118	<66.2	<137	--
Demeton O	<118	<66.2	<63.5 UJ	--
Demeton S	<118	<66.2	<63.5	--
Diazinon	<118	<66.2	<63.5	56,000
Dichlorvos	<118	<66.2	<63.5	3,400
Dimethoate	<118	<66.2	<63.5	180,000
Disulfoton	<118	<66.2	<63.5	3,200
EPN	<118	<66.2	<63.5	800
Ethoprop	<118	<66.2	<63.5	--
Fensulfothion	<118	<66.2	<63.5	--
Fenthion	<118	<66.2	<63.5	--
Malathion	<118	<66.2	<63.5	1,600,000
Merphos	<175	<176	<268	2,400
Methyl parathion	<118	<66.2	<76.2	20,000
Mevinphos (Phosdrin)	<118	<66.2	<63.5	--
Monocrotophos	<118	<66.2	<63.5	--
Naled (Dibrom)	<118	<66.2	<63.5 UJ	160,000
Parathion, ethyl	<187	<66.2	<63.5	480,000
Phorate	<118	<66.2	<63.5	16,000
Ronnel (Fenchlorphos)	<118	<66.2	<63.5	4,000,000
Sulfotep	<118	<66.2	<63.5	40,000
Sulprofos (Bolstar)	<118	<66.2	<63.5	--
TEPP	<473	<265	<254	--
Tetrachlorvinphos (Rabon)	<118	<66.2	<63.5	42,000
Tokuthion (Prothiofos)	<118	<66.2	<63.5	--
Trichloronate	<118	<66.2	<63.5	--

Notes:

1. µg/kg = Micrograms per kilogram.
2. < = Analyte was not detected above the reporting limit shown.
3. Soil cleanup levels from the MTCA Method B 173-340 WAC (July 2022 update).
4. -- = Value not available.
5. UJ = The not detected result is estimated.

Table 5 - Drainage Sediment Results: Herbicides
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	Slough 1-4	Barn 2	Outfall 8	MTCA Method B
Date:	9/14/2022	10/6/2022	10/6/2022	Cleanup Level
<i>Herbicides by EPA Method 8151A in µg/kg</i>				
2,4,5-T	<20	<4.7	<5.3	800,000
2,4,5-TP (Silvex)	<40	<9.6	<11	640,000
2,4-D	<260	<62	<69	800,000
2,4-DB	<540	<130	<140	--
Dicamba	<25	<6.0	<6.7	2,400,000
Dichlorprop	<260	<63	<70	--
Dinoseb	<320	<75	<84	80,000
MCPA	<26000	<6200	<6900	40,000
Dalapon	<390	<93	<100	2,400,000
MCPP	<35000	<8400	<9400	80,000

Notes:

1. µg/kg = Micrograms per kilogram.
2. < = Analyte was not detected above the detection limit shown.
3. Soil cleanup levels from the MTCA Method B 173-340 WAC (July 2022 update).
4. -- = Value not available.

Table 6 - Soil Results: TPH
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Sample Location ID	Depth (feet bgs)	Date	Total Petroleum Hydrocarbons (TPH) by NWTPH		
			Gasoline Range Organics	Diesel Range Organics	Residual Range Organics
			Concentrations in mg/kg		
MTCA Method A Cleanup Level			30/100 ¹	2,000	2,000
AST-1-5'	5	09/15/2022	<1.72	6.73	18.9
AST-1-10'	10	09/15/2022	<1.66	3.57 J	23.9
AST-2-3'	3	09/15/2022	163	173	109
AST-2-10'	10	09/15/2022	6.83	5.34 J	17.9
AST-3-5'	5	09/15/2022	<1.64	5.43 J	17.2
AST-3-10'	10	09/15/2022	<2.79	5.51 J	35.7
AST-4 (2.5-3)	3	01/03/2023	<6.07	<60.3	178
AST-4 (14-15)	15	01/03/2023	38.1	<63.6	<127
AST-4A (4.4-5)	4	01/03/2023	28.6	<56.9	469
AST-4A (9.5-10)	10	01/03/2023	<7.12	<77.6	160
AST-4B (5.5-5)	5	01/06/2023	171	762	<127
AST-4B (9.5-10)	10	01/06/2023	<10.3	<72.2	<144
AST-5 (3-4)	3	01/03/2023	<5.16	<52.4	134
AST-5 (9.5-10)	10	01/03/2023	<7.53	<79.4	167
AST-6 (2.5-3)	3	01/03/2023	414	<53.5	<107
AST-6 (10-11)	10	01/03/2023	713	<46.7	<93.4
AST-6 (14.5-15)	15	01/03/2023	<7.31	<62.7	<125
AST-6A (10-11)	10	01/03/2023	9.73	<68.6	175
AST-6A (14.5-15)	15	01/03/2023	<7.66	<72.4	<145
AST-6B (9.5-10)	10	01/03/2023	<13.2	<94.3	491
AST-7 (9.5-10)	10	01/03/2023	<8.53	<78.6	<157
AST-8 (9.5-10)	10	01/03/2023	<11.9	<87.1	<174
BARN-1-3.5'	3.5	09/15/2022	--	7.39 J	51.4
MW-3 (4-6')	5	01/05/2023	2.76	<52.8	1860
SB-01 (9.5-10)	10	09/28/2022	<1.62	2.68 J	11.6 J
SB-01 (14.5-15)	15	09/28/2022	5.97	<1.66	4.83 J
SB-02 (4.5-5)	5	09/28/2022	25.3	25.1	144
SB-02 (14.5-15)	15	09/28/2022	<1.44	2.50 J	11.5 J
SB-03 (4.5-5)	5	09/28/2022	<1.60	10.3	58.4
SB-03 (13-13.5)	13	09/28/2022	<1.96	4.57 J	49.4
SB-04 (4.5-5)	5	09/28/2022	<1.47	<1.82	11.7 J
SB-04 (9.5-10)	10	09/28/2022	<2.50	<2.41	8.73 J
SB-04 (13-14)	13	09/28/2022	<2.34	4.20 J	46.4
SB-05 (4.5-5)	5	09/28/2022	1.33 J	<1.60	4.94 J
SB-05 (9-10)	10	09/28/2022	<1.99	<2.21	17.1
SB-05 (14.5-15)	15	01/04/2023	<9.24	<80.7	<161
SB-06 (4.5-5)	5	09/28/2022	3.72 J	5.95	19.8
SB-06 (9-10)	10	09/28/2022	<1.96	<2.20	<5.51
SB-06 (14.5-15)	15	01/04/2023	<7.73	<69	<138
SB-07 (12.5-13)	13	01/04/2023	<9.92	<79.4	<159
SB-07 (24.5-25)	25	01/04/2023	<6.46	<65.2	<130
SB-08 (13.5-14)	14	01/04/2023	<11.1	<89.6	<179
SB-08 (24.5-25)	25	01/04/2023	<6.08	<64.5	<129
SB-08 A (14.5-15)	15	01/05/2023	<10.9	<87.9	<176
SB-09 (13-13.5)	13	01/04/2023	<8.31	<69.2	<138
SB-09 (24.5-25)	25	01/04/2023	<5.74	<62.7	<125
SB-10 (12.5-13)	13	01/05/2023	<11.8	<78.6	<157
SB-11 (14-14.5)	14	01/05/2023	<5.94	<59.4	<119
SB-12 (14-14.5)	14	01/05/2023	<9.05	<63.5	<127
SB-13 (13-13.5)	13	01/09/2023	<13.8	<99.9	<200
SB-13 (24.5-25)	25	01/09/2023	<5.71	<60.9	<122
SB-14 (14-14.5)	14	01/09/2023	<14.7	<93.5	<187
SB-14 (24.5-25)	25	01/09/2023	<6.69	<64.3	<129
SB-14A (14-14.5)	14	01/09/2023	<13.2	<111	<222
SB-15 (12.5-13)	13	01/09/2023	<6.69	<68.9	<138
SB-16 (14.5-15)	15	01/09/2023	<5.23	<59.4	<119
SB-17 (14.5-15)	15	01/10/2023	<8.24	<76.4	<153
SB-18 (14.5-15)	15	01/10/2023	<8.19	<65.8	<132
SB-19 (13-13.5)	13	01/10/2023	<13.7	<98.6	<197
SB-20 (14.5-15)	15	01/10/2023	<16.9	<95.2	<190
SB-20 (20-24.5)	20	01/10/2023	<7.47	<64.8	<130
SB-21 (14-14.5)	14	01/10/2023	<10.9	<98.2	<196
SB-21 (19.5-20)	20	01/10/2023	<6.29	<65.7	<131
SB-22-17	17	01/25/2023	<6.56	<62.5	<125
SB-23-12	12	01/25/2023	<6.18	<57.5	<115
SB-24-11	11	01/25/2023	<6.23	<59.6	<119
SB-25-6	6	01/25/2023	<6.1	<56.6	<113
SHOP-1-2.5'	2.5	09/15/2022	--	3.56 J	8.49 J
SHOP-1-5'	5	09/15/2022	--	2.26 J	<5.23
SHOP-2-2.5'	2.5	09/15/2022	--	2,720 J	4,380 J
SHOP-2-5'	5	09/15/2022	--	2.41 J	<5.03
SHOP-3 (9.5-10)	10	01/03/2023	<9.56	<74.1	203
SHOP-4 (2.5-3)	3	01/05/2023	475	141	481
SHOP-4 (5-6)	5	01/03/2023	176	<61.9	712
SHOP-4 (9.5-10)	10	01/03/2023	<10.4	<80	<160
SHOP-4A (9.5-10)	10	01/04/2023	<7.28	<63.3	<127
SHOP-4B (13-14)	13	01/06/2023	--	<70.5	<141
SHOP-4B (19-20)	20	01/06/2023	--	<63.6	<127
SHOP-5 (9.5-10)	10	01/04/2023	<8.62	<69.1	<138
VAULT-1-7'	7	09/15/2022	--	5.03 J	60.6
VAULT-1-15'	15	09/15/2022	--	2.82 J	16.9
VAULT-2-7'	7	09/15/2022	--	3.57 J	20.9
VAULT-2-15'	15	09/15/2022	--	2.19 J	35.6

Notes:

1. mg/kg = Milligrams per kilogram
2. Bold values indicate the compound was detected above method detection limits
3. < = Analyte was not detected above the reporting limit shown
4. Shaded results exceed the Model Toxics Control Act (MTCA) Method A soil cleanup level for unrestricted land use.
5. Soil cleanup levels from the MTCA Method A 173-340 WAC (July 2022 update)
6. -- = Value not available.
7. The MTCA Method A Cleanup Level for TPH as gasoline range organics is 30 mg/kg when benzene is detected, and 100 mg/kg when benzene is not detected.
8. bgs = Below ground surface.
9. J = Result is estimated

Table 7 - Soil Results: VOCs
 Dagmar Marina Facility - 1871 Ross Avenue
 Everett, Washington

Boring ID:	AST-06		SB-04			SB-07	SB-08	SB-22-17	SB-23-12	SB-24-11	SB-25-6	SHOP-4		MTCA Method A Cleanup Level
Sample Location ID:	AST-6 (2.5-3)	AST-6 (10-11)	SB-04 (4.5-5)	SB-04 (9.5-10)	SB-04 (13-14)	SB-07 (12.5-13)	SB-08 (13.5-14)	SB-22-17	SB-23-12	SB-24-11	SB-25-6	SHOP-4 (2.5-3)	SHOP-4 (5-6)	
Sample Depth (feet bgs):	3	10	5	10	14	13	14	17	12	11	6	3	5	
Date:	01/03/2023	01/03/2023	09/28/2022	09/28/2022	09/28/2022	01/04/2023	01/04/2023	01/25/2023	01/25/2023	01/25/2023	01/25/2023	01/05/2023	01/03/2023	
Volatile Organic Compounds (VOCs) by EPA Method 8260D in mg/kg														
Acetone	<0.237	<0.19	<0.0632	<0.108	<0.101	<0.496	<0.557	<0.328	<0.309	<0.311	<0.305	<0.294	<0.326	--
Acrylonitrile	--	--	<0.00625	<0.0107	<0.00998	--	--	--	--	--	--	--	--	--
Arylene	0.373	1.59	<0.00089	<0.00138	<0.00129	<0.0347	<0.039	<0.023	<0.0216	<0.0218	<0.0213	<0.0206	<0.0228	0.03
Bromobenzene	<0.0118	<0.00949	<0.00156	<0.00265	<0.00249	<0.0248	<0.0278	<0.0164	<0.0154	<0.0156	<0.0152	<0.0147	<0.0163	--
Bromodichloromethane	<0.019	<0.0237	<0.00126	<0.00214	<0.00200	<0.0496	<0.0557	<0.0328	<0.0309	<0.0311	<0.0305	<0.0294	<0.0326	--
Bromofom	<0.0142	<0.0114	<0.00203	<0.00345	<0.00323	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	--
Bromomethane	<0.0237	<0.019	<0.00341 UJ	<0.00580 UJ	<0.00545 UJ	<0.0496	<0.0557	<0.0328	<0.0309	<0.0311	<0.0305	<0.0294	<0.0326	--
n-Butylbenzene	1.51	1.62	<0.00909	<0.0155	<0.0145	<0.0397	<0.0445	<0.0262	<0.0247	<0.0249	<0.0244	<0.0235	<0.0261	--
sec-Butylbenzene	0.266	0.339	<0.00499	<0.00850	<0.00796	<0.298	<0.334	<0.197	<0.185	<0.187	<0.183	<0.176	<0.196	--
tert-Butylbenzene	<0.0142	<0.0114	<0.00338	<0.00575	<0.00539	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	--
Carbon Tetrachloride	<0.0237	<0.019	<0.00156	<0.00265	<0.00248	<0.0496	<0.0557	<0.0328	<0.0309	<0.0311	<0.0305	<0.0294	<0.0326	--
Chlorobenzene	<0.0142	<0.0114	<0.000364	<0.000620	<0.000580	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	--
Chlorodibromomethane	<0.0142	<0.0114	<0.00106	<0.00181	<0.00169	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	--
Chloroethane	<0.0711	<0.0569	<0.00294	<0.00503	<0.00470	<0.149	<0.167	<0.0984	<0.0927	<0.0934	<0.0915	<0.0882	<0.0978	--
Chloroform	<0.0166	<0.0133	<0.00178	<0.00305	<0.00285	<0.0347	<0.039	<0.023	<0.0216	<0.0218	<0.0213	<0.0206	<0.0228	--
Chloromethane	<0.0474	<0.038	<0.00753 UJ	<0.0128 UJ	<0.0120 UJ	<0.0992	<0.111	<0.0656	<0.0618	<0.0623	<0.061	<0.0588	<0.0652	--
2-Chlorotoluene	<0.0156	<0.0125	<0.00150	<0.00255	<0.00239	<0.0327	<0.0367	<0.0216	<0.0207	<0.0206	<0.0201	<0.0194	<0.0215	--
4-Chlorotoluene	0.392	0.631	<0.000779	<0.00133	<0.00124	<0.0327	<0.0367	<0.0216	<0.0204	<0.0206	<0.0201	<0.0194	<0.0215	--
1,2-Dibromo-3-Chloropropane	<0.0284	<0.0228	<0.00675	<0.0115	<0.0108	<0.0595	<0.0668	<0.0394	<0.0371	<0.0374	<0.0366	<0.0353	<0.0391	--
1,2-Dibromomethane	<0.00759	<0.00948	<0.00112	<0.00191	<0.00179	<0.0198	<0.0223	<0.0131	<0.0124	<0.0125	<0.0122	<0.0118	<0.013	0.005
Dibromomethane	<0.0118	<0.00949	<0.00130	<0.00221	<0.00207	<0.0248	<0.0278	<0.0164	<0.0154	<0.0156	<0.0152	<0.0147	<0.0163	--
1,2-Dichlorobenzene	<0.019	<0.0152	<0.000736	<0.00126	<0.00117	<0.0397	<0.0445	<0.0262	<0.0247	<0.0249	<0.0244	<0.0235	<0.0261	--
1,3-Dichlorobenzene	<0.019	<0.0152	<0.00104	<0.00177	<0.00166	<0.0397	<0.0445	<0.0262	<0.0247	<0.0249	<0.0244	<0.0235	<0.0261	--
1,4-Dichlorobenzene	<0.0142	<0.0114	<0.00121	<0.00207	<0.00193	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	--
Dichlorodifluoromethane	<0.0114	<0.0142	<0.00279 UJ	<0.00475 UJ	<0.00445 UJ	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	--
1,1-Dichloroethane	<0.114	<0.019	<0.000850	<0.00145	<0.00136	<0.0496	<0.0557	<0.0328	<0.0309	<0.0311	<0.0305	<0.0294	<0.0326	--
1,2-Dichloroethane	<0.019	<0.0152	<0.00112	<0.00192	<0.00179	<0.0397	<0.0445	<0.0262	<0.0247	<0.0249	<0.0244	<0.0235	<0.0261	--
1,1-Dichloroethene	<0.0948	<0.0759	<0.00105	<0.00179	<0.00168	<0.198	<0.223	<0.131	<0.124	<0.125	<0.122	<0.118	<0.13	--
cis-1,2-Dichloroethene	<0.0142	<0.0114	<0.00127	<0.00217	<0.00203	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	--
trans-1,2-Dichloroethene	<0.00948	<0.00759	<0.00180	<0.00308	<0.00287	<0.0198	<0.0223	<0.0131	<0.0124	<0.0125	<0.0122	<0.0118	<0.013	--
1,2-Dichloropropane	<0.0237	<0.019	<0.00246	<0.00420	<0.00393	<0.0496	<0.0557	<0.0328	<0.0309	<0.0311	<0.0305	<0.0294	<0.0326	--
1,1-Dichloropropane	<0.019	<0.0152	<0.00140	<0.00239	<0.00224	<0.0397	<0.0445	<0.0262	<0.0247	<0.0249	<0.0244	<0.0235	<0.0261	--
1,3-Dichloropropane	<0.00948	<0.00759	<0.000868	<0.00148	<0.00138	<0.0198	<0.0223	<0.0131	<0.0124	<0.0125	<0.0122	<0.0118	<0.013	--
cis-1,3-Dichloropropane	<0.0142	<0.0114	<0.00131	<0.00223	<0.00209	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	--
trans-1,3-Dichloropropane	<0.019	<0.0152	<0.00197	<0.00338	<0.00315	<0.0397	<0.0445	<0.0262	<0.0247	<0.0249	<0.0244	<0.0235	<0.0261	--
Di-Isopropyl Ether	--	--	<0.00239	<0.00408	<0.00381	--	--	--	--	--	--	--	--	--
--	--	--	<0.000710	<0.00121	<0.00113	--	--	--	--	--	--	--	--	--
Ethylbenzene	2.67	10.9	<0.00128	<0.00218	<0.00204	<0.0496	<0.0557	<0.0328	<0.0309	<0.0311	<0.0305	<0.0294	<0.0326	6
Hexachloro-1,3-Butadiene	<0.0379	<0.0304	<0.0104	<0.0177	<0.0166	<0.0794	<0.089	<0.0525	<0.0494	<0.0498	<0.0488	<0.0471	<0.0522	--
Isopropylbenzene	0.462	0.979	<0.000736	<0.00126	<0.00117	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	--
p-Isopropyltoluene	<0.19	0.207	<0.00442	<0.00753	<0.00705	<0.397	<0.445	<0.262	<0.247	<0.249	<0.244	<0.235	<0.261	--
2-Butanone (MEK)	<0.284	<0.228	<0.110	<0.187	<0.176	<0.595	<0.668	<0.394	<0.371	<0.374	<0.366	<0.353	<0.391	--
Methylene Chloride	<0.0332	<0.0266	<0.0115	0.104	0.0777	<0.0695	<0.0779	<0.0459	<0.0432	<0.0436	<0.0427	<0.0412	<0.0457	0.02
4-Methyl-2-Pentanone (MIBK)	<0.0456	<0.0569	<0.00395	<0.00673	<0.00630	<0.119	<0.134	<0.0787	<0.0741	<0.0747	<0.0732	<0.0706	<0.0783	--
Methyl tert-Butyl Ether	<0.019	<0.0152	<0.000606	<0.00103	<0.000967	<0.0397	<0.0445	<0.0262	<0.0247	<0.0249	<0.0244	<0.0235	<0.0261	0.1
Naphthalene	1.61	682	<0.00845	<0.0144	<0.0135	<31.2	<36	<0.131	<0.124	<0.125	<0.122	<0.118	<24.3	5
n-Propylbenzene	1.7	3.52	<0.00165	<0.00280	<0.00263	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	0.0211	--
Styrene	<0.00948	<0.00759	0.00303 J+	<0.000675	<0.000633	<0.0198	<0.0223	<0.0131	<0.0124	<0.0125	<0.0122	<0.0118	<0.013	--
1,1,1,2-Tetrachloroethane	<0.0237	<0.019	<0.00164	<0.00280	<0.00262	<0.0496	<0.0557	<0.0328	<0.0309	<0.0311	<0.0305	<0.0294	<0.0326	--
1,1,2,2-Tetrachloroethane	<0.19	<0.152	<0.00120	<0.00205	<0.00192	<0.397	<0.445	<0.262	<0.247	<0.249	<0.244	<0.235	0.407	--
1,1,2-Trichlorotrifluoroethane	--	--	<0.00131	<0.00223	<0.00208	--	--	--	--	--	--	--	--	--
Tetrachloroethene	<0.0142	<0.0114	<0.00155	<0.00265	<0.00248	<0.0298	<0.0334	<0.0197	<0.0185	<0.0187	<0.0183	<0.0176	<0.0196	0.05
Toluene	6.13	45	0.00234 J	0.0445	0.00918 J	<0.0595	<0.0668	<0.0394	<0.0371	<0.0374	<0.0366	<0.0353	<0.0391	7
1,2,3-Trichlorobenzene	<0.0569	<0.0456	<0.0127	<0.0216	<0.0203	<0.119	<0.134	<0.0787	<0.0741	<0.0747	<0.0732	<0.0706	<0.0783	--
1,2,4-Trichlorobenzene	<0.0569	<0.0456	<0.00762	<0.0130	<0.0122	<0.119	<0.134	<0.0787	<0.0741	<0.0747	<0.0732	<0.0706	<0.0783	--
1,1,1-Trichloroethane	<0.019	<0.152	<0.00160	<0.00273	<0.00255	<0.0397	<0.0445	<0.0262	<0.0247	<0.0249	<0.0244	<0.0235	<0.0261	2
1,1,2-Trichloroeth														

Table 8 - Soil Results: Metals
Daguerre Marina Facility - 1871 Ross Avenue
Everett, Washington

Boring ID	ARS-1		ARS-2		ARS-2		ARS-3		ARS-4		ARS-4B		AST-6		MW-1		MW-3		SB-01		SB-04		SB-07		SB-08		SHOP-4		SHOP-4B		Puget Sound Natural Background Concentrations	MTCA Method A Cleanup Level
Sample Location ID	ARS-1 (0-3)	ARS-1 (3-6)	ARS-2 (0-5)	ARS-2 (5-12)	ARS-2 (12-15)	ARS-2 (15-17)	ARS-2 (17-20)	ARS-3 (0-4)	ARS-3 (4-9)	ARS-3 (9-14)	ARS-3 (14-20)	ARS-4 (10-15)	ARS-4B (5-5.5)	ARS-4B (9.5-10)	AST-6 (10-11)	MW-1-10'	MW-3 (4-6')	SB-01 (9.5-10)	SB-01 (14.5-15)	SB-04 (9.5-10)	SB-07 (12.5-13)	SB-08 (13.5-14)	SHOP-4 (2.5-3)	SHOP-4 (5-6)	SHOP-4B (15-14)	SHOP-4B (19-20)						
Sample Depth (feet bgs)	3	6	5	12	15	17	20	4	9	14	20	5	5	10	10-11	10	5	9.5-10	14.5-15	9.5-10	12.5-13	12.5-13	3	5	14	20						
Date	01/05/2023	01/06/2023	01/06/2023	01/06/2023	01/06/2023	01/06/2023	01/06/2023	01/06/2023	01/06/2023	01/06/2023	01/06/2023	01/10/2023	01/06/2023	01/06/2023	01/03/2023	09/15/2022	01/05/2023	09/28/2022	09/28/2022	09/28/2022	01/04/2023	01/04/2023	01/05/2023	01/03/2023	01/06/2023	01/06/2023						
Metals by EPA Method 6030B and 7471B in mg/kg																																
Arsenic	4.03	8.89	4.49	5.93	10.3	9.53	11.4	2.33	10.2	9.23	7.5	<10.5	13.0	13.9	21.5	19.1	2.71	14.6	5.26	11.2	12.9	14.3	5.74	5.39	9.71	6.08	7	20				
Barium	31.5	36.5	20.4	28.2	24.7	25.2	29.4	40.0	26.0	15.1	22.7	--	40.2	38.2	32.7	46.0	30.2	54.0	31.5	60.0	28.0	34.5	23.7	24.2	36.0	23.9	--	--				
Cadmium	0.0484	0.139	0.0471	0.0665	0.0732	0.118	0.0759	0.0511	0.045	0.0986	0.0925	--	0.193	0.059	0.521	0.169 J	0.518	0.218 J	<0.107	<0.155	0.102	0.114	0.0495	0.163	0.121	0.0675	1	2				
Chromium	19.6	19.3	17.1	19.9	27.7	33.2	34.4	19.3	30.8	20.8	26.4	--	35.6	46.8	8.88	33.4	16.9	52.7	22.6	72.9	38.5	44.4	19.2	20.4	40.7	25	48	2000				
Copper	13.2	17.6	11.1	14.2	22	28.2	27.4	9.8	20.5	20.0	22.7	--	30.3	32.9	24	26.8	679	49.8	15.3	35.9	27.8	29.7	12.6	23.5	33.7	18.8	36	--				
Lead	3.62	12.4	3.06	4.01	6.69	4.45	6.07	2.43	5.6	2.96	3.97	--	12.9	6.81	21.8	12.9	16.2	9.71	3.58	8.27	5.97	6.27	7.38	16	6.1	3.19	24	250				
Nickel	25	20.5	16.8	20.7	21.5	21.8	31	26.1	20.4	21.4	24.7	--	27.4	36.4	8.18	28.4	15.4	49.6	24.7	54.1	39	43.2	20	20.7	33.7	21.1	48	--				
Selenium	<0.905	<1.22	<0.833	<0.964	<1.13	<1.25	<1.09	<0.859	<1.18	<1.31	<1.12	--	<1.03	<1.18	<0.864	<0.310	<0.803	0.490 J	<0.225	0.658 J	<1.22	<1.4	<0.868	<0.976	<1.14	<0.957	--	--				
Silver	0.0244	0.0324	<0.0167	0.0231	0.058	0.0686	0.0655	0.0266	0.0355	0.0451	0.0578	--	0.0627	0.0749	0.107	<0.149	0.0622	<0.125	<0.108	<0.157	0.0629	0.0699	0.0208	0.0229	0.103	0.0388	--	--				
Zinc	31.2	64.3	32.4	37.5	37.4	34.8	49.3	23.8	34.1	25.9	39.5	--	45	62.8	107	85.7	78.5	69.5	37.4	75.0	50.7	57.7	34.4	41.8	61.2	38.7	85	--				
Mercury	<0.21	<0.311	<0.218	<0.225	<0.261	<0.306	<0.28	<0.222	<0.301	<0.324	<0.263	--	<0.242	<0.289	<0.2	0.0333 J	<0.214	0.0623 J	<0.0225	0.0546 J	<0.299	<0.367	<0.224	<0.229	<0.273	<0.236	0.07	2				
Total Organic Carbon by EPA Method 9060																																
Total Organic Carbon	0.214	1.76	<0.15	0.259	1.35	3.19	3.25	0.279	2.65	7.25	1.44	<4.73	1.38	1.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

Notes:

1. mg/kg = Milligrams per kilogram.
2. Bold values indicate the compound was detected above method detection limits.
3. < = Analyte was not detected above the detection limit shown.
4. Shaded results exceed the Model Toxics Control Act (MTCA) Method A Soil Cleanup Level for unrestricted land use and/or the Natural Background Soil Concentrations.
5. Soil cleanup levels from the MTCA Method A 173-340 WAC (July 2022 update).
6. -- = Value not available.
7. bgs = Below ground surface.
8. J = Result is estimated.

Table 9 - Soil Results: PCBs
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Boring ID:	SHOP-2	SHOP-4	MTCA Method A Cleanup Level
Sample Location ID:	SHOP-2-2.5'	SHOP-4 (5-6)	
Sample Depth (feet bgs):	2.5	5	
Date:	09/15/2022	01/03/2023	
<i>Polychlorinated Biphenyls (PCBs) by EPA Method 8082A in mg/kg</i>			
Aroclor 1016	<0.0143	<0.0224	--
Aroclor 1221	<0.0143	<0.0224	--
Aroclor 1232	<0.0143	<0.0224	--
Aroclor 1242	<0.0143	<0.0224	--
Aroclor 1248	<0.00893	<0.0224	--
Aroclor 1254	<0.00893	<0.0224	--
Aroclor 1260	<0.00893	<0.0224	--
Aroclor 1262	--	<0.0224	--
Aroclor 1268	--	<0.0224	--
Total PCBs	<0.0143	<0.0224	1

Notes:

1. mg/kg = Milligrams per kilogram.
2. < = Analyte was not detected above the detection limit shown.
3. Soil cleanup levels from the MTCA Method A 173-340 WAC (July 2022 update).
4. -- = Value not available.
5. bgs = Below ground surface.

Table 10 - Soil Results: PAHs
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Boring ID:	AST-6	SB-07	SB-08	SHOP-4		MTCA Method A Cleanup Level
Sample Location ID:	AST-6 (10-11)	SB-07 (12.5-13)	SB-08 (13.5-14)	SHOP-4 (2.5-3)	SHOP-4 (5-6)	
Sample Depth (feet bgs):	11	13	14	3	5	
Date:	01/03/2023	01/04/2023	01/04/2023	01/05/2023	01/03/2023	
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270 SIM in mg/kg						
Acenaphthene	<20.5	<31.2	<36	<20.6	<24.3	--
Acenaphthylene	<20.5	<31.2	<36	<20.6	<24.3	--
Anthracene	<20.5	<31.2	<36	<20.6	<24.3	--
Benzo(a)anthracene	<20.5	<31.2	<36	<20.6	<24.3	--
Benzo(a)pyrene	<30.8	<46.8	<54	<30.8	<36.5	2
Benzo(b)fluoranthene	<25.6	<39	<45	<25.7	<30.4	--
Benzo(g,h,i)perylene	<51.3	<78	<90	<51.4	<60.9	--
Benzo(k)fluoranthene	<25.6	<39	<45	<25.7	<30.4	--
Chrysene	<20.5	<31.2	<36	<20.6	<24.3	--
Dibenzo(a,h)anthracene	<51.3	<78	<90	<51.4	<60.9	--
Fluoranthene	<20.5	<31.2	<36	<20.6	<24.3	--
Fluorene	<20.5	<31.2	<36	<20.6	<24.3	--
Indeno(1,2,3-cd)pyrene	<41	<62.4	<72	<41.1	<48.7	--
1-Methylnaphthalene	418	<31.2	<36	<20.6	<24.3	--
2-Methylnaphthalene	790	<31.2	<36	<20.6	<24.3	--
Naphthalene	2.63	<0.198	<0.223	<0.118	<0.13	5
Phenanthrene	<20.5	<31.2	<36	<20.6	<24.3	--
Pyrene	<41	<62.4	<72	<41.1	<48.7	--

Notes:

1. mg/kg = Milligrams per kilogram.
2. Bold values indicate the compound was detected above method detection limits.
3. < = Analyte was not detected above the detection limit shown.
5. Soil cleanup levels from the MTCA Method A 173-340 WAC (July 2022 update).
6. -- = Value not available.
7. bgs = Below ground surface.

Table 11 - Groundwater Results: TPH and VOCs
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	Direct Push Sample Collection			Monitoring Well Sample Collection				MTCA Method A Cleanup Level
	GW4	GW-7	SHOP-4	MW-2	MW-3	MW-4	MW-5	
Date:	09/28/2022	01/04/2023	01/03/2023	01/27/2023	01/26/2023	01/26/2023	01/26/2023	
Total Petroleum Hydrocarbons (TPH) by NWTPH-Gx in µg/L								
Gasoline Range Organics	180	<50	<50	<50.0	<50.0	<50.0	<50.0	800/1000 ⁷
Diesel Range Organics	15,400 J	1,100	1,730	191	573	465	345	500
Residual Range Organics	74,100 J	<94.4	<98.4	<93.9	<95.5	<93.0	<94.1	500
Volatile Organic Compounds (VOCs) by EPA Method 8260D in µg/L								
Acetone	114	6.61	--	266	19.7	32.4	15.3	--
Acrylonitrile	<0.0760	--	--	--	--	--	--	--
Benzene	32.3	<0.44	--	<0.440	<0.440	<0.440	<0.4400	5
Bromobenzene	<0.0420	<0.5	--	<0.500	<0.500	<0.500	<0.500	--
Bromodichloromethane	0.194	<0.25	--	<0.250	<0.250	<0.250	<0.250	--
Bromoform	<0.239	<0.300	--	<0.300	<0.300	<0.300	<0.300	--
Bromomethane	<0.148	<3.00	--	<3.00	<3.00	<3.00	<3.00	--
n-Butylbenzene	<0.153	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
sec-Butylbenzene	<0.101	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
tert-Butylbenzene	<0.0620	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
Carbon Tetrachloride	<0.0432	<0.300	--	<0.300	<0.300	<0.300	<0.300	--
Chlorobenzene	<0.0229	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
Chlorodibromomethane	<0.0180	<0.300	--	<0.300	<0.300	<0.300	<0.300	--
Chloroethane	<0.0432	<1.00	--	<1.00	<1.00	<1.00	<1.00	--
Chloroform	2.54	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
Chloromethane	<0.0556 UJ	<0.750	--	<0.750	<0.750	<0.750	<0.750	--
2-Chlorotoluene	<0.0368	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
4-Chlorotoluene	<0.0452	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
1,2-Dibromo-3-Chloropropane	<0.204 UJ	<1.00	--	<1.00	<1.00	<1.00	<1.00	--
1,2-Dibromoethane	<0.0210	<0.200	--	<0.200	<0.200	<0.200	<0.200	0.01
Dibromomethane	<0.0400	<0.250	--	<0.250	<0.250	<0.250	<0.250	--
1,2-Dichlorobenzene	<0.0580	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
1,3-Dichlorobenzene	<0.0680	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
1,4-Dichlorobenzene	<0.0788	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
Dichlorodifluoromethane	<0.0327	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
1,1-Dichloroethane	<0.0230	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
1,2-Dichloroethane	<0.0190	<0.500	--	<0.500	<0.500	<0.500	<0.500	5
1,1-Dichloroethene	<0.0200	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
cis-1,2-Dichloroethene	<0.0276	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
trans-1,2-Dichloroethene	<0.0572	<0.350	--	<0.350	<0.350	<0.350	<0.350	--
1,2-Dichloropropane	<0.0508	<0.300	--	<0.300	<0.300	<0.300	<0.300	--
1,1-Dichloropropane	<0.0280	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
1,3-Dichloropropane	<0.0700	<0.300	--	<0.300	<0.300	<0.300	<0.300	--
cis-1,3-Dichloropropene	<0.0271	<0.350	--	<0.350	<0.350	<0.350	<0.350	--
trans-1,3-Dichloropropene	<0.0612	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
2,2-Dichloropropane	<0.0317	--	--	--	--	--	--	--
Di-Isopropyl Ether	<0.0140	--	--	--	--	--	--	--
Ethylbenzene	3.44	<0.200	--	<0.400	<0.400	<0.400	<0.400	700
Hexachloro-1,3-Butadiene	<0.508	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
Isopropylbenzene	0.118	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
p-Isopropyltoluene	0.250	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
2-Butanone (MEK)	10.8	<1.50	--	<1.50	3.67	3.23	3.96	--
Methylene Chloride	<0.265	<0.750	--	<0.750	<0.750	<0.750	<0.750	5
Please see notes at end of table.								
4-Methyl-2-Pentanone (MIBK)	<0.400	<1.00	--	<1.00	<1.00	<1.00	<1.00	--
Methyl tert-Butyl Ether	<0.0118	<0.350	--	<0.350	<0.350	<0.350	<0.350	20
Naphthalene	13.8	0.277	--	<1.25	<1.25	<1.25	<1.25	160
n-Propylbenzene	0.279	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
Styrene	2.10	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
1,1,1,2-Tetrachloroethane	<0.0200	<0.300	--	<0.300	<0.300	<0.300	<0.300	--
1,1,2,2-Tetrachloroethane	<0.0156	<0.200	--	<0.200	<0.200	<0.200	<0.200	--
1,1,2-Trichlorotrifluoroethane	<0.0270	--	--	--	--	--	--	--
Tetrachloroethene	<0.0280	<0.350	--	<0.350	<0.350	<0.350	<0.350	5
Toluene	37.2	<1.00	--	<1.00	<1.00	<1.00	<1.00	1000
1,2,3-Trichlorobenzene	<0.0250	<0.700	--	<0.700	<0.700	<0.700	<0.700	--
1,2,4-Trichlorobenzene	<0.193	<0.750	--	<0.750	<0.750	<0.750	<0.750	--
1,1,1-Trichloroethane	<0.0110 UJ	<0.300	--	<0.300	<0.300	<0.300	<0.300	200
1,1,2-Trichloroethane	<0.0353	<0.250	--	<0.250	<0.250	<0.250	<0.250	--
Trichloroethene	<0.0160	<0.400	--	<0.400	<0.400	<0.400	<0.400	5
Trichlorofluoromethane	<0.0200	<0.300	--	<0.300	<0.300	<0.300	<0.300	--
1,2,3-Trichloropropane	<0.204 UJ	<0.400	--	<0.400	<0.400	<0.400	<0.400	--
1,2,4-Trimethylbenzene	4.17	<0.500	--	<0.500	<0.500	<0.500	0.619	--
1,2,3-Trimethylbenzene	5.22	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	0.962	<0.500	--	<0.500	<0.500	<0.500	<0.500	--
Vinyl Chloride	<0.0273	<0.200	--	<0.200	<0.200	<0.200	<0.200	0.2
Xylenes, Total	22.8	<1.50	--	<1.50	<1.50	<1.50	<1.50	1000
Bromochloromethane	<0.0452	--	--	--	--	--	--	--
Carbon Disulfide	0.435 J	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-Butene	<0.0560	--	--	--	--	--	--	--
2-Hexanone	<0.400	--	--	<1.25	<1.25	<1.25	<1.25	--
n-Hexane	<0.0424	--	--	--	--	--	--	--
Iodomethane	<0.242 UJ	--	--	--	--	--	--	--
Vinyl Acetate	<0.141	--	--	--	--	--	--	--

Notes:

1. µg/L = Micrograms per liter.
2. Bold values indicate the compound was detected above method detection limits.
3. < = Analyte was not detected above the detection limit shown.
4. Shaded results exceed the Model Toxics Control Act (MTCA) Method A groundwater cleanup level.
5. Groundwater cleanup levels from the MTCA Method A 173-340 WAC (July 2022 update).
6. -- = Value not available.
7. The MTCA Method A Cleanup Level for TPH as gasoline range organics is 800 µg/L when benzene is detected, and 1,000 µg/L when benzene is not detected.
8. J = Result is estimated.
9. UJ = The not detected result is estimated.

Table 12 - Groundwater Results: PAHs
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

		Direct Push Sample Collection
Boring ID:	GW-07 ⁵	MTCA Method A Cleanup Level
Sample Location ID:	GW-07-0123	
Date:	01/04/2023	
Polycyclic Aromatic Hydrocarbons (PAH) by 8270 SIM in µg/L		
Acenaphthene	<0.0995	--
Acenaphthylene	<0.0995	--
Anthracene	<0.0995	--
Benzo(a)anthracene	<0.0995	--
Benzo(a)pyrene	<0.0995	0.1
Benzo(b)fluoranthene	<0.0995	--
Benzo(g,h,i)perylene	<0.0995	--
Benzo(k)fluoranthene	<0.0995	--
Chrysene	<0.0995	--
Dibenzo(a,h)anthracene	<0.0995	--
Fluoranthene	<0.0995	--
Fluorene	<0.0995	--
Indeno(1,2,3-cd)pyrene	<0.0995	--
1-Methylnaphthalene	<0.0995	--
2-Methylnaphthalene	<0.0995	--
Phenanthrene	<0.0995	--
Pyrene	<0.199	--

Notes:

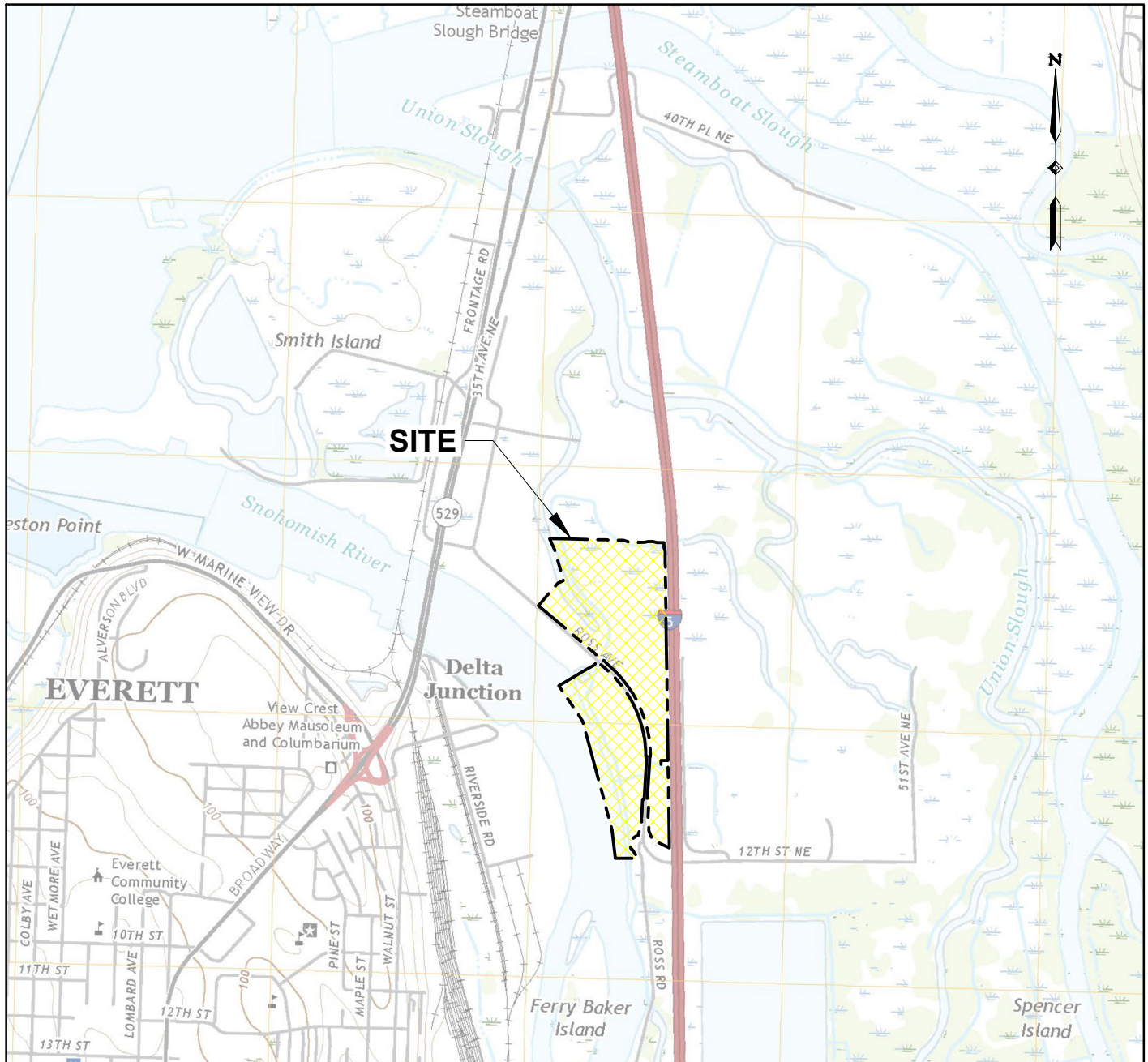
1. mg/kg = Milligrams per kilogram.
2. < = Analyte was not detected above the detection limit shown.
3. Soil cleanup levels from the MTCA Method A 173-340 WAC (July 2022 update).
4. -- = Value not available.

Table 13 - Groundwater Results: Metals
Dagmar Marina Facility - 1871 Ross Avenue
Everett, Washington

	Monitoring Well Sample Collection		Direct Push Sample Collection	
Sample Location ID:	MW-1-UF	MW-1-F	GW-7	MTCA Method A Cleanup Level
Date:	10/06/2022	10/06/2022	01/04/2023	
Metals by EPA Method 6020B in µg/L				
Arsenic	14.7	20.4	41.8	5
Barium	--	--	157	--
Cadmium	--	--	<0.500	5
Chromium	--	--	24.0	50
Copper	--	--	--	--
Lead	--	--	2.66	15
Nickel	--	--	--	--
Selenium	--	--	<1.25	--
Silver	--	--	<1.00	--
Zinc	--	--	--	--
Mercury	--	--	<0.100	2

Notes:

1. µg/L = Micrograms per liter.
2. Bold values indicate the compound was detected above method detection limits.
3. < = Analyte was not detected above the detection limit shown.
4. Shaded results exceed the Model Toxics Control Act (MTCA) Method A groundwater cleanup level.
5. Groundwater cleanup levels from the MTCA Method A 173-340 WAC (July 2022 update).
6. -- = Value not available.



Marysville, Washington

United States Geological Survey
7.5 Minute Series Topographic Map
Contour Interval: 20 feet
Scale: 1 inch = 24,000 feet
Date: 2020

0 2,000 4,000
Scale in Feet



WASHINGTON

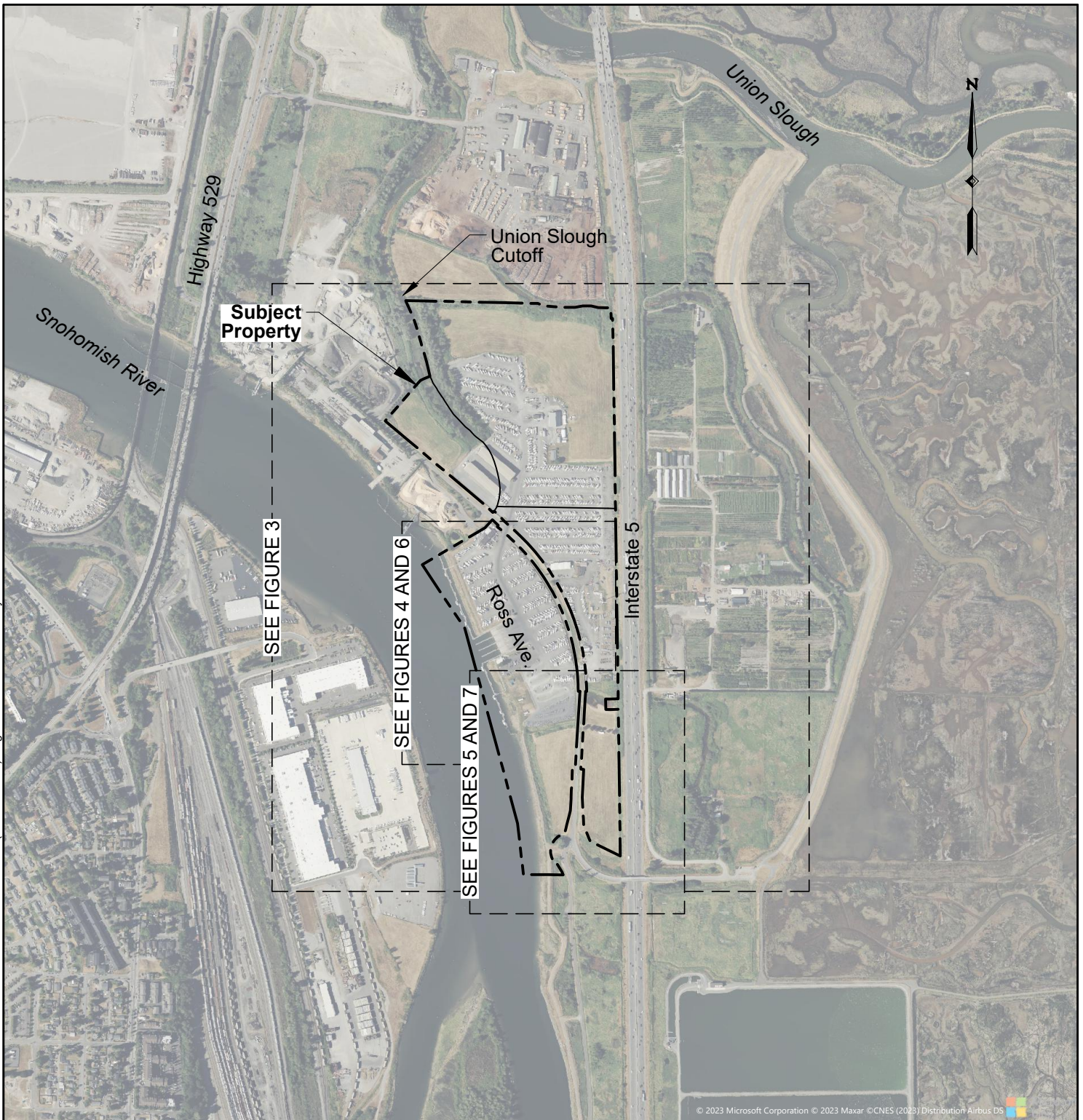
Site Location Map

Supplemental Remedial Investigation
Dagmars Marina Property - 1871 Ross Avenue
Everett, Washington

Apex Companies, LLC
801 NW 42nd Street, #204
APEX Seattle, Washington 98107

Project Number: 32-22012832	Drawn: JP	Approved: AU
November 2023		

Figure
1



NOTE: Base map prepared from Microsoft Bing imagery (2023).
Parcel information from Snohomish County
(<ftp://ftp.snoco.org/assessor>).

0 1,000 2,000
Scale in Feet

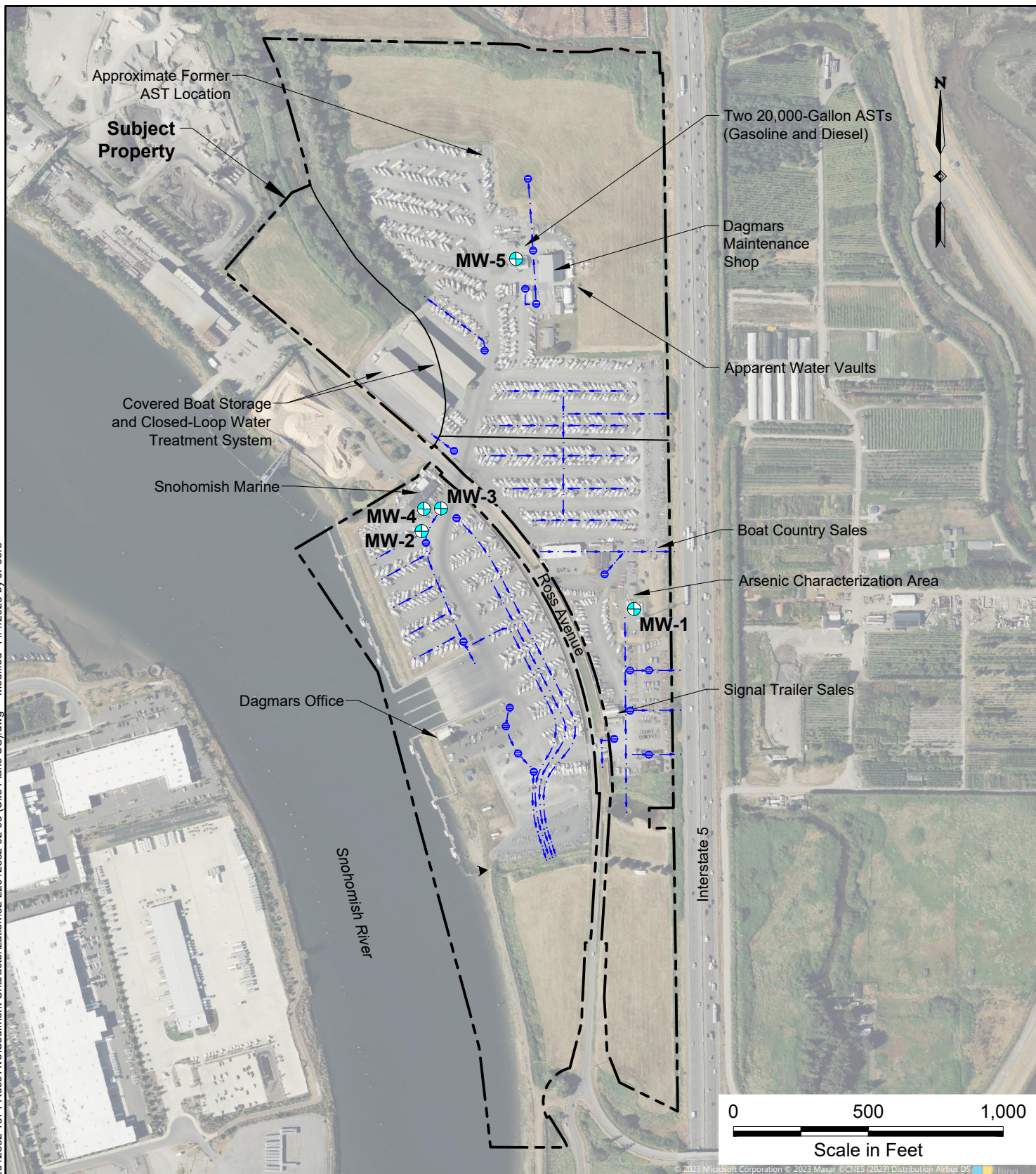
Site Vicinity Plan

Supplemental Remedial Investigation
Dagmars Marina Property - 1871 Ross Avenue
Everett, Washington

Apex Companies, LLC
801 NW 42nd Street, #204
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Figure
2



Legend:

- ⊕ Monitoring Well Location
- ▼ Approximate Stormwater Outfall Location
- Approximate Drain Line and Direction
- Approximate Catch Basin Location

NOTE: Base map prepared from Microsoft Bing imagery (2023).
Parcel information from Snohomish County (<http://ftp.snoco.org/assessor>).

Site Layout

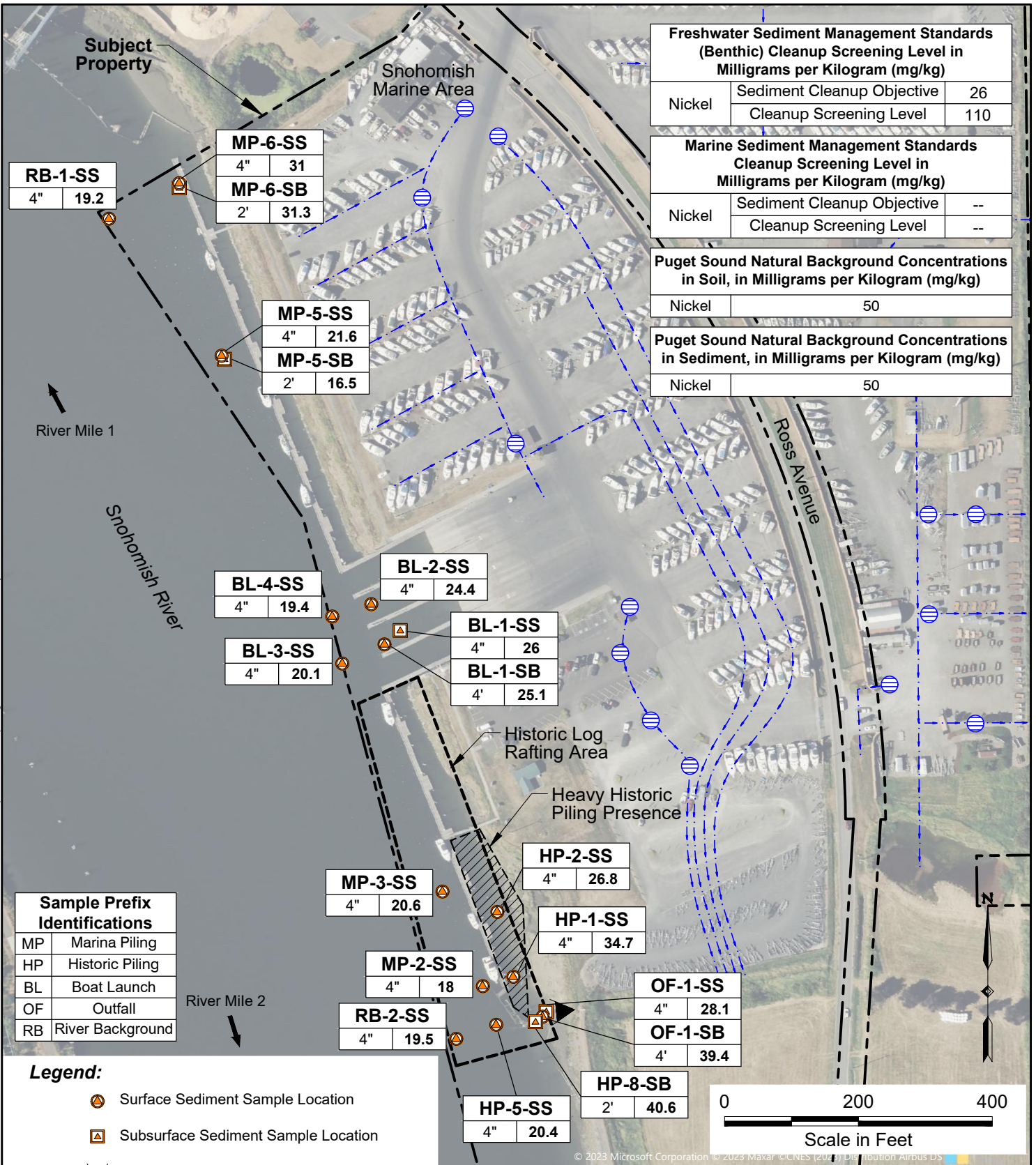
Supplemental Remedial Investigation
Dagmars Marina Property - 1871 Ross Avenue
Everett, Washington

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801 NW 42nd Street, #204
Seattle, Washington 98107

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November 2023

Figure
3



Sediment Sampling Results - Nickel (North)

Supplemental Remedial Investigation
Dagmars Marina Property - 1871 Ross Avenue
Everett, Washington

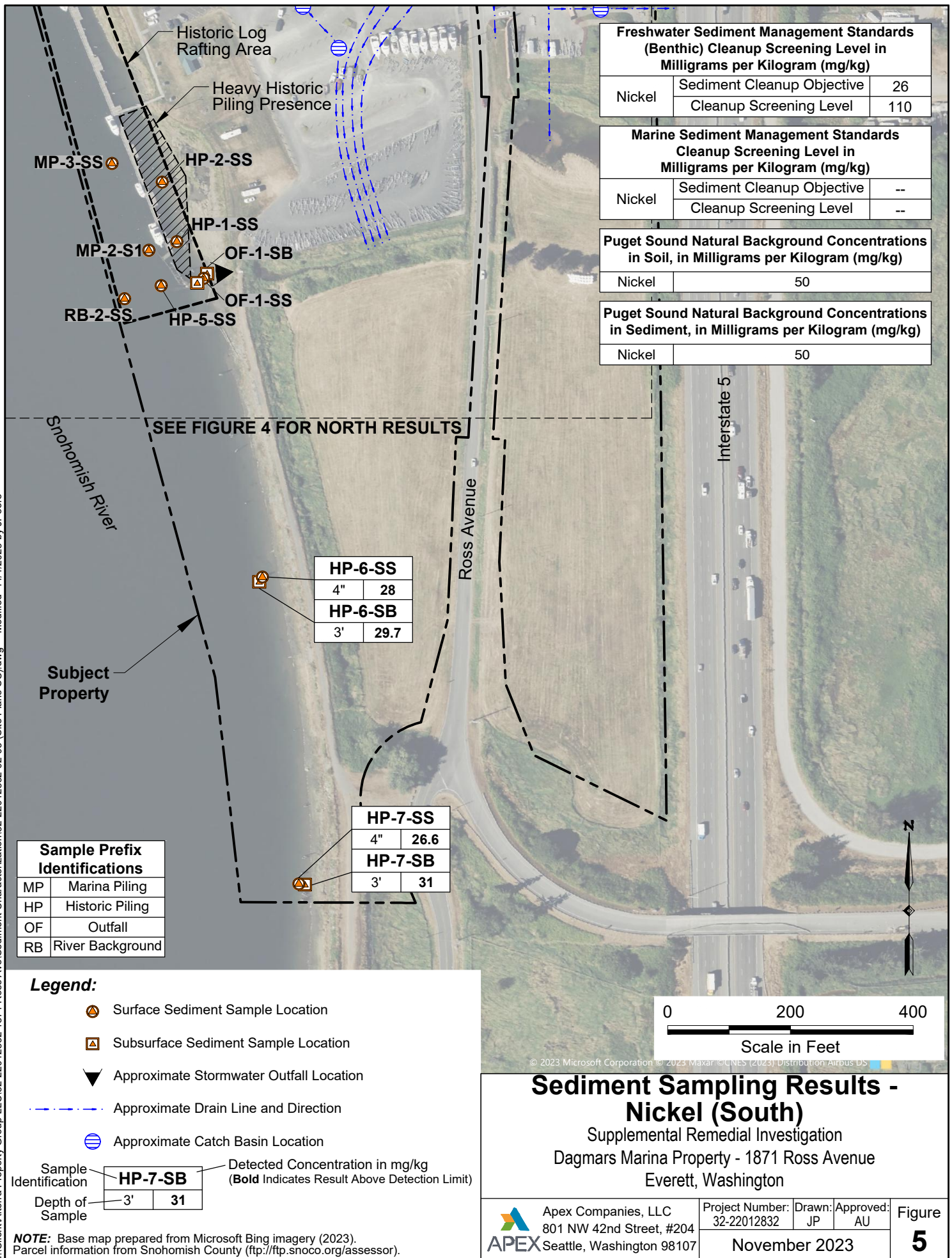
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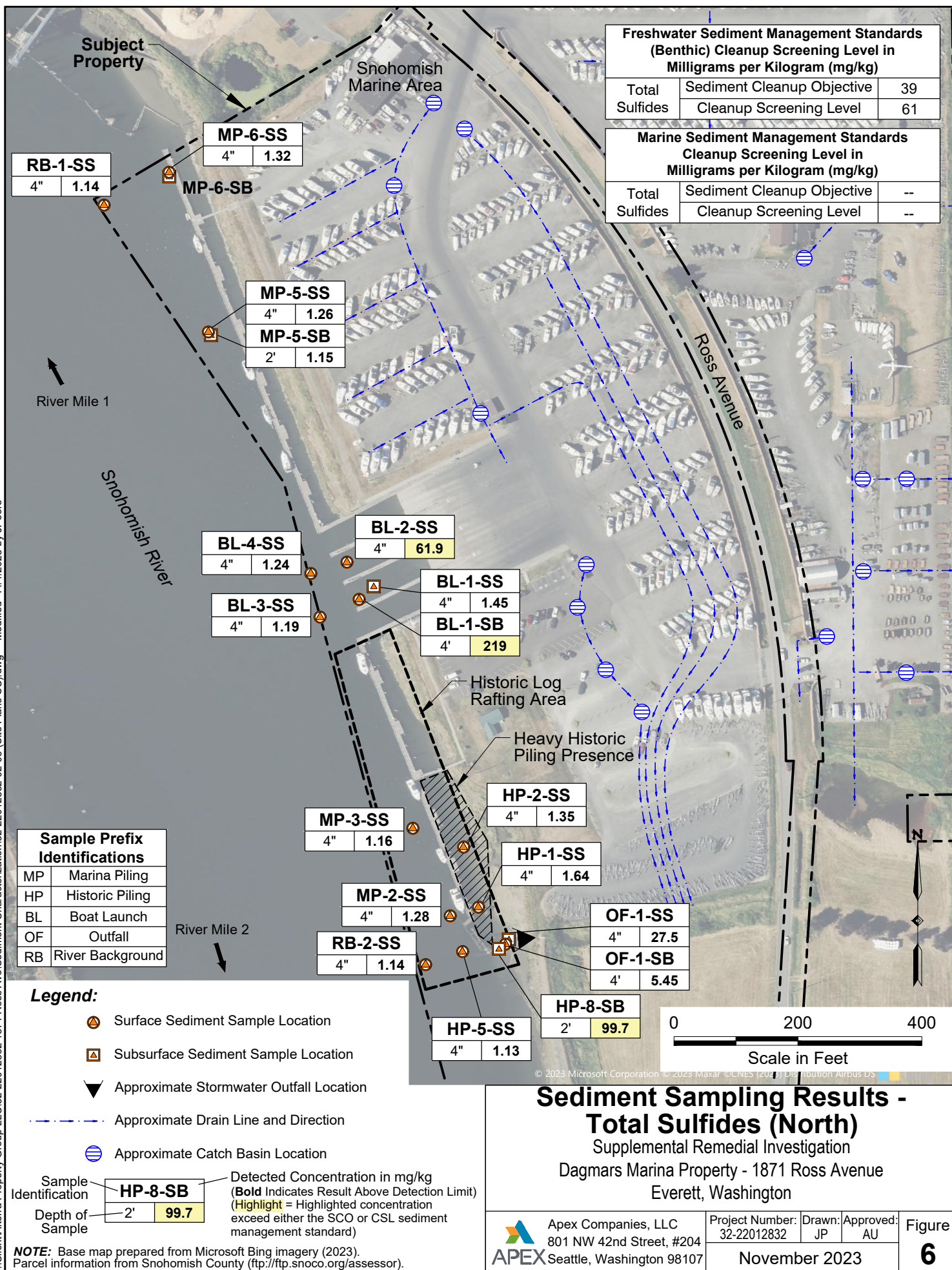
November 2023

Figure
4

NOTE: Base map prepared from Microsoft Bing imagery (2023).
Parcel information from Snohomish County (<http://ftp.snoco.org/assessor>).



I:\Client\Alterra Property Group LLC\32-22012832 1871 Ross Ave\Sediment Characterization\32-22012832 02-05 (Site Plans SC).dwg Modified 11/1/2023 by jPoore



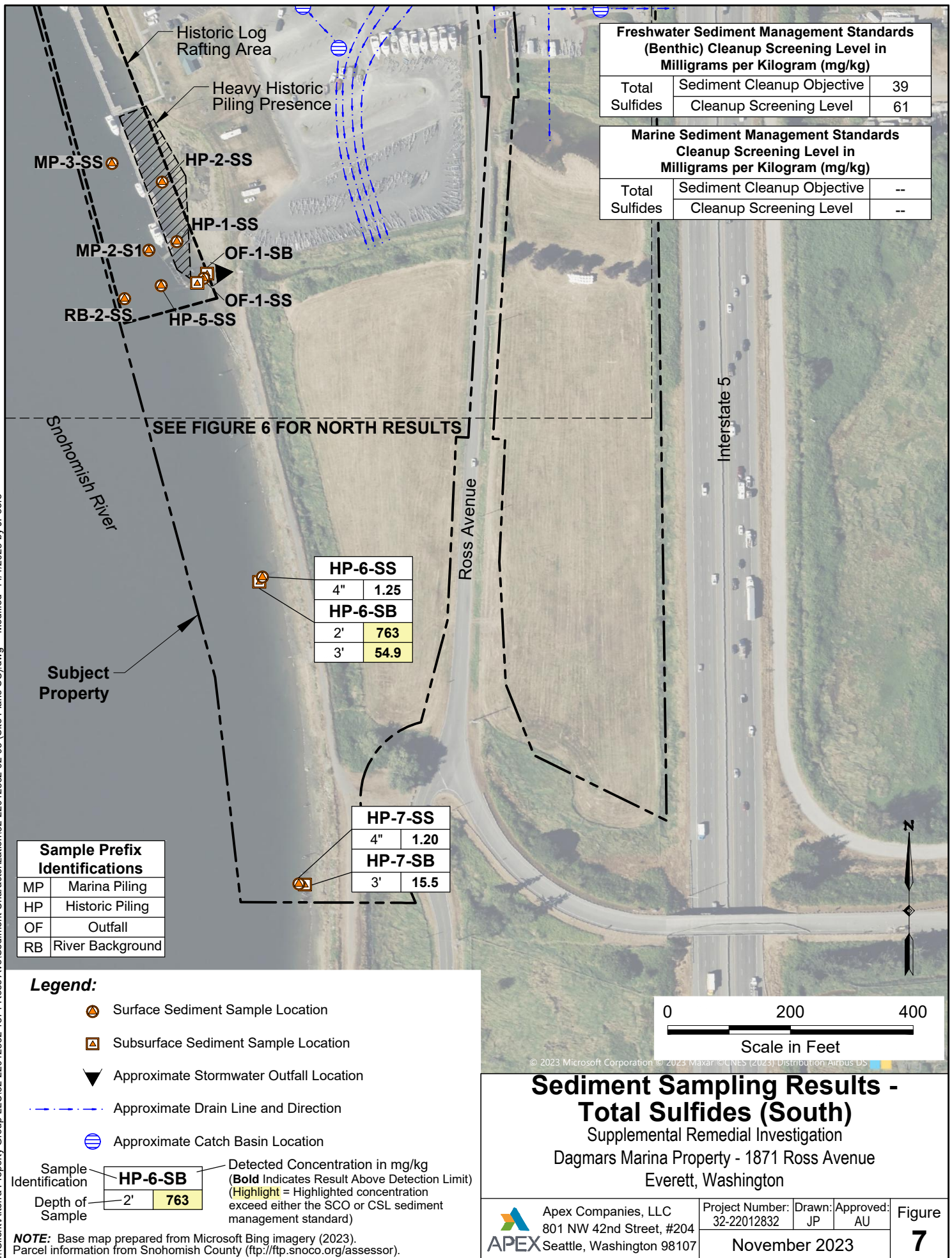


Table 1 - Final Sample Station Coordinates
Dagmars Marina - 1871 Ross Avenue
Everett, Washington

Sample Location	Final X	Final Y	Local Latitude	Local Longitude	WGS84 Latitude	WGS84 Longitude	Depth (feet)	Time	Date
BL-1-SS-1	1311077.19	371981.5	48.01187736 N	122.17894392 W	48.01187736 N	122.17894392 W	8.4	12:37:08	8/28/2023
BL-1_SB1	1311076.68	371986.97	48.01189234 N	122.1789464 W	48.01189234 N	122.1789464 W	4.8	9:54:21	8/29/2023
BL-2_SS1	1311057.51	372041.25	48.01204019 N	122.17902858 W	48.01204019 N	122.17902858 W	9	13:07:40	8/28/2023
BL-3_SS1	1311014.1	371952.81	48.01179569 N	122.17919961 W	48.01179569 N	122.17919961 W	13.1	12:54:12	8/28/2023
BL-4_SS1	1310999.15	372022.99	48.01198736 N	122.17926567 W	48.01198736 N	122.17926567 W	14.1	13:27:47	8/28/2023
HP-1_SS1			48.0105253 N	122.1781223 W	48.0105253 N	122.1781223 W	0	10:41:00	8/30/2023
HP-2_SS1			48.0107902 N	122.1782272 W	48.0107902 N	122.1782272 W	0	10:30:00	8/30/2023
HP-5_SS1	1311253.19	371421.31	48.01035033 N	122.17818498 W	48.01035033 N	122.17818498 W	17.1	15:59:35	8/28/2023
HP-5_SS2	1311254.16	371425.37	48.01036151 N	122.17818131 W	48.01036151 N	122.17818131 W	16.8	16:03:04	8/28/2023
HP-5_SS3	1311244.02	371413.25	48.0103278 N	122.17822186 W	48.0103278 N	122.17822186 W	17.7	16:06:23	8/28/2023
HP-5_SB1	1311256.54	371421.12	48.01034997 N	122.17817128 W	48.01034997 N	122.17817128 W	8.5	12:56:25	8/29/2023
HP-5_SB2	1311251.04	371414.76	48.01033228 N	122.17819329 W	48.01033228 N	122.17819329 W	11	13:08:13	8/29/2023
HP-5_SB3	1311244.73	371415.05	48.01033277 N	122.17821909 W	48.01033277 N	122.17821909 W	12	13:21:05	8/29/2023
HP-6_SS1	1311408.94	370938.51	48.00903445 N	122.17751432 W	48.00903445 N	122.17751432 W	10.9	16:53:47	8/28/2023
HP-6_SB1	1311403.83	370931.01	48.00901364 N	122.17753465 W	48.00901364 N	122.17753465 W	5.5	13:37:06	8/29/2023
HP-7_SS1	1311468.33	370438.95	48.007668 N	122.17723609 W	48.007668 N	122.17723609 W	10.7	17:07:05	8/28/2023
HP-7_SB1	1311472.94	370438.9	48.00766809 N	122.17721725 W	48.00766809 N	122.17721725 W	4.9	14:29:57	8/29/2023
HP-7_SB2	1311478.27	370437.9	48.0076656 N	122.17719541 W	48.0076656 N	122.17719541 W	4.9	14:41:22	8/29/2023
HP-8_SB1	1311296.11	371412.59	48.01032849 N	122.17800904 W	48.01032849 N	122.17800904 W	5	15:02:07	8/30/2023
HP-8_SB2	1311296.7	371413.25	48.01033032 N	122.17800667 W	48.01033032 N	122.17800667 W	5	15:14:34	8/30/2023
HP-8_SB3	1311302.84	371417.76	48.01034298 N	122.17798191 W	48.01034298 N	122.17798191 W	5	15:47:11	8/30/2023
MP-2_S1	1311224	371470.72	48.01048437 N	122.17830774 W	48.01048437 N	122.17830774 W	19.1	15:50:40	8/28/2023
MP-3_SS1	1311163.94	371612.2	48.01086928 N	122.17856318 W	48.01086928 N	122.17856318 W	18.2	15:40:18	8/28/2023
MP-4_SS1	1310960.32	372161.6	48.01236542 N	122.17943422 W	48.01236542 N	122.17943422 W	14.2	14:06:15	8/28/2023
MP-4_SS2	1310987.6	372131.56	48.01228439 N	122.17932061 W	48.01228439 N	122.17932061 W	17	14:16:57	8/28/2023
MP-4_SS3	1310987.13	372132.01	48.01228558 N	122.17932256 W	48.01228558 N	122.17932256 W	17.1	14:19:42	8/28/2023
MP-4_SS4	1310984.82	372136.02	48.01229647 N	122.17933228 W	48.01229647 N	122.17933228 W	18	14:25:11	8/28/2023
MP-4_SS5	1310952.21	372162.01	48.01236615 N	122.17946736 W	48.01236615 N	122.17946736 W	19.1	15:33:33	8/28/2023
MP-5_SS1	1310851.69	372413.85	48.01305162 N	122.17989599 W	48.01305162 N	122.17989599 W	17	15:06:08	8/28/2023
MP-5_SS2	1310851.2	372408.99	48.01303827 N	122.17989764 W	48.01303827 N	122.17989764 W	18	15:09:46	8/28/2023
MP-5_SS3	1310833.81	372412.78	48.01304783 N	122.17996895 W	48.01304783 N	122.17996895 W	19.1	15:12:54	8/28/2023
MP-5_SB2	1310854.34	372417.76	48.01306246 N	122.17988544 W	48.01306246 N	122.17988544 W	0	10:48:31	8/29/2023
MP-5_SB3	1310838.19	372407.65	48.01303398 N	122.17995069 W	48.01303398 N	122.17995069 W	9	11:25:58	8/29/2023
MP-6_SS1	1310770.49	372670.33	48.01375072 N	122.18024603 W	48.01375072 N	122.18024603 W	7.6	14:36:31	8/28/2023
MP-6_SB1	1310770.93	372663.7	48.01373258 N	122.18024376 W	48.01373258 N	122.18024376 W	4	9:01:10	8/30/2023
OF-1_SS1			48.0103638 N	122.1779395 W	48.0103638 N	122.1779395 W	0	10:48:00	8/30/2023
OF-1_SB1	1311318.84	371432.9	48.01038525 N	122.17791764 W	48.01038525 N	122.17791764 W	7	16:24:24	8/30/2023
RB-1_SS1	1310665.59	372617.35	48.01360048 N	122.18067077 W	48.01360048 N	122.18067077 W	17.4	14:53:26	8/28/2023
RB-2_SS1	1311184.5	371392.04	48.01026681 N	122.17846348 W	48.01026681 N	122.17846348 W	17.8	16:22:21	8/28/2023

Notes:

1. SS = surface sediment sample
2. SB = subsurface sediment sample
3. Number at the end of sample ID is the attempt number per sample station. Example: MP-5-SB2 = Second subsurface sample attempt at sample station MP-5

Table 2 - Sediment Results: TPH and PAHs
Dagmars Marina - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	BL-1-SS	BL-2-SS	BL-3-SS	BL-4-SS	RB-1-SS	RB-2-SS	MP-2-SS	MP-3-SS	MP-5-SS	MP-6-SS	HP-5-SS	HP-6-SS	HP-7-SS	BL-1-SB-4'	MP-5-SB-2'	HP-6-SB-3'	MP-6-SB-2'	HP-1-SS	HP-2-SS	OF-1-SS	Sediment Management Standards Sediment Cleanup Objectives		Sediment Management Standards Cleanup Screening Levels	
	Date:	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/29/23	8/29/23	8/29/23	8/30/23	8/30/23	8/30/23	8/30/23	Freshwater	Marine	Freshwater	Marine
Total Petroleum Hydrocarbons (TPH) by NWTPH in mg/kg																								
Diesel Range Organics	<49.8	<50	<60.5	<49.7	<61.2	<61.6	<58.6	<57.5	<49.8	<49.8	<56	<49.9	<49.9	<49.9	<59.6	<49.8	<49.9	<49.8	<50	<50.2	340	--	510	--
Heavy Oil	<99.6	<100	<121	<99.4	<122	<123	<117	<115	<99.6	<99.5	<112	<99.7	<99.9	<99.7	<119	<99.5	<99.8	<99.5	<100	<100	3600	--	4400	--
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270E-SIM in mg/kg																								
Anthracene	<0.0199	<0.0200	<0.0248	<0.0199	<0.0251	0.0371	<0.0238	<0.0239	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	<0.0200	<0.0195 UJ	--	220	--	1200
Acenaphthene	<0.0199	<0.0200	<0.0248	<0.0199	<0.0251	0.0492	<0.0238	<0.0239	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	<0.0200	<0.0195 UJ	--	16	--	57
Acenaphthylene	<0.0199	<0.0200	<0.0248	<0.0199	<0.0251	0.0352	<0.0238	<0.0239	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	<0.0200	<0.0195 UJ	--	66	--	66
Benzo(a)anthracene	0.0256	<0.0200	<0.0248	<0.0199	<0.0627	0.0487	<0.0238	<0.0239	<0.0498	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	0.0893	0.0211 J-	--	110	--	270
Benzo(a)pyrene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	0.0450	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	<0.0300	<0.0359	<0.0300	<0.0299	<0.0299	0.076	<0.0292 UJ	--	99	--	210
Benzo(b)fluoranthene	0.0254	<0.0250	<0.0310	<0.0249	<0.0314	0.0527	<0.0298	<0.0298	<0.0249	<0.0250	<0.0276	<0.0249	<0.0300	<0.0250	<0.0299	<0.0250	<0.0249	<0.0250	0.159	<0.0244 UJ	--	--	--	--
Benzo(g,h,i)perylene	<0.0498	<0.0500	<0.0620	<0.0499	<0.0627	<0.0615	<0.0595	<0.0596	<0.0498	<0.0499	<0.0553	<0.0498	<0.0501	<0.0500	<0.0599	<0.0500	<0.0498	<0.0500	<0.0500	<0.0487 UJ	--	31	--	78
Benzo(k)fluoranthene	<0.0249	<0.0250	<0.0310	<0.0249	<0.0314	0.0427	<0.0238	<0.0298	<0.0249	<0.0250	<0.0276	<0.0199	<0.0250	<0.0250	<0.0299	<0.0250	<0.0199	<0.0250	0.0482	<0.0244 UJ	--	--	--	--
Chrysene	0.0265	<0.0200	<0.0248	<0.0199	<0.0251	0.0534	<0.0238	<0.0239	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	0.139	0.0700 J-	--	110	--	460
Dibenz(a,h)anthracene	<0.0498	<0.0500	<0.0620	<0.0499	<0.0627	<0.0615	<0.0595	<0.0596	<0.0498	<0.0499	<0.0553	<0.0199	<0.0501	<0.0500	<0.0599	<0.0500	<0.0199	<0.0499	<0.0500	<0.0487 UJ	--	12	--	33
Fluoranthene	0.0248	<0.0200	<0.0248	<0.0199	<0.0251	0.0437	<0.0238	<0.0357	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	0.162	0.0271 J-	--	160	--	1200
Fluorene	<0.0199	<0.0200	<0.0248	<0.0199	<0.0251	0.0470	<0.0238	<0.0239	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	<0.0200	<0.0195 UJ	--	23	--	79
Indeno(1,2,3-cd)pyrene	<0.0398	<0.0400	<0.0496	<0.0399	<0.0502	0.0519	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	<0.0400	<0.0390 UJ	--	34	--	88
Naphthalene	<0.0199	<0.0200	<0.0248	<0.0199	<0.0251	0.0359	<0.0238	<0.0239	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	<0.0200	<0.0195 UJ	--	99	--	170
Phenanthrene	<0.0199	<0.0200	<0.0248	<0.0199	<0.0251	0.0501	<0.0238	<0.0239	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	<0.0200	<0.0195 UJ	--	100	--	480
Pyrene	<0.0398	<0.0400	<0.0496	<0.0399	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	0.0638	<0.0390 UJ	--	1000	--	1400
1-Methylnaphthalene	<0.0199	<0.0200	<0.0248	<0.0199	<0.0251	0.0380	<0.0238	<0.0239	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	<0.0200	<0.0195 UJ	--	--	--	--
2-Methylnaphthalene	<0.0199	<0.0200	<0.0248	<0.0199	<0.0251	0.0386	<0.0238	<0.0239	<0.0199	<0.0200	<0.0221	<0.0199	<0.0200	<0.0200	<0.0240	<0.0200	<0.0199	<0.0200	<0.0200	<0.0195 UJ	--	38	--	64
Total PAHs	0.1023	0.0000	0.0000	0.0000	0.0000	0.6692	0.0000	0.0000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7373	0.1182 J-	17	--	30	--

- Notes:
- mg/kg = Milligrams per kilogram.
 - Bold values indicate the compound was detected above method detection limits.
 - < = Analyte was not detected above the detection limit shown.
 - Sediment Management Standards from WAC 173-204 and Washington Ecology's *Sediment Cleanup User's Manual* (December 2019 update).
 - = Value not available.
 - J = Result is estimated.
 - J+ = Result is estimated and may be biased high.

Table 3 - Sediment Results: SVOCs
Dagmars Marina - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	BL-1-SS	BL-2-SS	BL-3-SS	BL-4-SS	RB-1-SS	RB-2-SS	MP-2-SS	MP-3-SS	MP-5-SS	MP-6-SS	HP-5-SS	HP-6-SS	HP-7-SS	Sediment Management Standards Sediment Cleanup Objectives		Sediment Management Standards Cleanup Screening Levels	
	Date:	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	Freshwater	Marine	Freshwater	Marine
Semivolatile Organic Compounds by EPA Method 8270E																	
Phenol	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	0.120	0.42	0.21	1.20
Bis(2-chloroethyl) ether	<0.0299	<0.0500	<0.0620	<0.0499	<0.0627	<0.0615	<0.0595	<0.0596	<0.0498	<0.0499	<0.0563	<0.0498	<0.0501	--	--	--	--
2-Chlorophenol	<0.0398	<0.0400	<0.0496	<0.0399	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	--	--	--	--
1,3-Dichlorobenzene	<0.0398	<0.0400	<0.0496	<0.0399	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	--	--	--	--
1,4-Dichlorobenzene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	3.1	--	9.0
1,2-Dichlorobenzene	<0.0398	<0.0400	<0.0496	<0.0399	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	--	2.3	--	2.3
Benzyl alcohol	<0.149	<0.150	<0.186	<0.150	<0.188	<0.184	<0.179	<0.179	<0.149	<0.150	<0.166	<0.149	<0.150	--	0.057	--	0.073
2-Methylphenol (o-cresol)	<0.0398	<0.0400	<0.0496	<0.0399	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	--	0.063	--	0.063
Hexachloroethane	<0.0398	<0.0400	<0.0496	<0.0399	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	--	--	--	--
N-Nitrosodi-n-propylamine	<0.0797	<0.0800	<0.0992	<0.0798	<0.100	<0.0983	<0.0952	<0.0954	<0.0797	<0.0799	<0.0884	<0.0797	<0.0801	--	--	--	0.011
3&4-Methylphenol (m, p-cresol)	0.0466	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	0.260	0.67	2.0	0.67
Nitrobenzene	<0.0498	<0.0500	<0.0620	<0.0499	<0.0627	<0.0615	<0.0595	<0.0596	<0.0498	<0.0499	<0.0563	<0.0498	<0.0501	--	--	--	--
Isophorone	<0.0398	<0.0400	<0.0496	<0.0299	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	--	--	--	--
2-Nitrophenol	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
2,4-Dimethylphenol	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	0.029	--	0.029
Bis(2-chloroethoxy)methane	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
2,4-Dichlorophenol	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
1,2,4-Trichlorobenzene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	0.81	--	1.80
Naphthalene	<0.0398	<0.0400	<0.0496	<0.0399	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	--	99	--	170
4-Chloroaniline	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
Hexachlorobutadiene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	3.9	--	6.2
4-Chloro-3-methylphenol	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
2-Methylnaphthalene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	0.0372	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	38	--	64
1-Methylnaphthalene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
Hexachlorocyclopentadiene	<0.0996	<0.100	<0.124	<0.0997	<0.125	<0.123	<0.119	<0.119	<0.0996	<0.0998	<0.111	<0.0996	<0.100	--	--	--	--
2,4,6-Trichlorophenol	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
2,4,5-Trichlorophenol	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
2-Chloronaphthalene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
2-Nitroaniline	<0.0498	<0.0500	<0.0620	<0.0499	<0.0627	<0.0615	<0.0595	<0.0596	<0.0498	<0.0499	<0.0563	<0.0498	<0.0501	--	--	--	--
Acenaphthene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	0.0396	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	16	--	57
Dimethylphthalate	<3.49	<3.50	<4.34	<3.49	<4.39	<4.30	<4.17	<4.17	<3.49	<3.49	<3.87	<3.49	<3.50	--	53	--	53
2,6-Dinitrotoluene	<0.0398	<0.0400	<0.0496	<0.0399	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	<0.0399	<0.0442	<0.0398	<0.0401	--	--	--	--
Acenaphthylene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	66	--	66
2,4-Dinitrophenol	<0.299	<0.300	<0.372	<0.299	<0.376	<0.369	<0.357	<0.358	<0.299	<0.299	<0.332	<0.299	<0.300	--	--	--	--
Dibenzofuran	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	0.0401	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	0.20	15	0.68	58
2,4-Dinitrotoluene	<0.0598	<0.0600	<0.0744	<0.0598	<0.0753	<0.0738	<0.0714	<0.0716	<0.0598	<0.0599	<0.0663	<0.0597	<0.0601	--	--	--	--
4-Nitrophenol	<0.199	<0.200	<0.248	<0.199	<0.251	<0.246	<0.238	<0.239	<0.199	<0.200	<0.221	<0.199	<0.200	--	--	--	--
Fluorene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	23	--	79
4-Chlorophenyl phenyl ether	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	0.0424	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
Diethylphthalate	<0.747	<0.750	<0.930	<0.748	<0.941	<0.922	<0.893	<0.895	<0.747	<0.749	<0.829	<0.747	<0.751	--	61	--	110
4,6-Dinitro-2-methylphenol	<0.249	<0.250	<0.310	<0.249	<0.314	<0.307	<0.298	<0.298	<0.249	<0.250	<0.276	<0.249	<0.250	--	--	--	--
4-Bromophenyl phenyl ether	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
Hexachlorobenzene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	0.0404	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	0.38	--	2.3
Pentachlorophenol	<0.199	<0.200	<0.248	<0.199	<0.251	<0.246	<0.238	<0.239	<0.199	<0.200	<0.221	<0.199	<0.200	1.2	360	>1.2	690
Phenanthrene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	0.0423	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	100	--	480
Anthracene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	220	--	1200
Carbazole	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	--	--	--
Di-n-butylphthalate	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	0.0375	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	0.38	220	1.0	1700
Fluoranthene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	160	--	1200
Pyrene	<0.149	<0.150	<0.186	<0.150	<0.188	<0.184	<0.179	<0.179	<0.149	<0.150	<0.166	<0.149	<0.150	--	1000	--	1400
Butyl Benzylphthalate	<0.0498	<0.0500	<0.0620	<0.0499	<0.0627	<0.0615	<0.0595	<0.0596	<0.0498	<0.0499	<0.0563	<0.0498	<0.0501	--	4.9	--	64
bis(2-Ethylhexyl)adipate	<0.199	<0.200	<0.248	<0.199	<0.251	<0.246	<0.238	<0.239	<0.199	<0.200	<0.221	<0.199	<0.200	--	--	--	--
Benz(a)anthracene	<0.0299	<0.0300	<0.0372	<0.0299	<0.0376	<0.0369	<0.0357	<0.0358	<0.0299	<0.0299	<0.0332	<0.0299	<0.0300	--	110	--	270
Chrysene	<0.0498	<0.0500	<0.0620	<0.0499	<0.0627	<0.0615	<0.0595	<0.0596	<0.0498	<0.0499	<0.0563	<0.0498	<0.0501	--	110	--	460
bis (2-Ethylhexyl) phthalate	0.137	0.235	<0.0496	<0.0399	<0.0502	<0.0492	<0.0476	<0.0477	<0.0399	0.102	<0.0442	<0.0398	0.100	0.50	47	22	78
Di-n-octyl phthalate	<0.0747	<0.0750	<0.0930	<0.0748	<0.0941	<0.0922	<0.0893	<0.0895	<0.0747	<0.0749	<0.0829	<0.0747	<0.0751	0.039	58	>1.1	4500
Benzo(b)fluoranthene	<0.0996	<0.100	<0.124	<0.0997	<0.125	<0.123	<0.119	<0.									

Table 3 - Sediment Results: SVOCs
Dagmars Marina - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	BL-1-SB-4'	MP-5-SB-2'	HP-6-SB-3'	MP-6-SB-2'	HP-1-SS	HP-2-SS	OF-1-SS	HP-7-SB-3'	OF-1-SB-4'	Sediment Management Standards Sediment Cleanup Objectives		Sediment Management Standards Cleanup Screening Levels	
	Date:	8/29/23	8/29/23	8/29/23	8/30/23	8/30/23	8/30/23	8/29/23	8/30/23	Freshwater	Marine	Freshwater	Marine
Semivolatile Organic Compounds by EPA Method 8270E													
Phenol	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	0.12	0.42	0.21	1.20
Bis(2-chloroethyl) ether	<0.0500	<0.0599	<0.0500	<0.0497	<0.0499	<0.0494	<0.0487	<0.0498	<0.0499	--	--	--	--
2-Chlorophenol	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	<0.0396	<0.0390	<0.0398	<0.0399	--	--	--	--
1,3-Dichlorobenzene	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	<0.0396	<0.0390	<0.0398	<0.0399	--	--	--	--
1,4-Dichlorobenzene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	3.1	--	9.0
1,2-Dichlorobenzene	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	<0.0396	<0.0390	<0.0398	<0.0399	--	2.3	--	2.3
Benzyl alcohol	<0.150	<0.180	<0.150	<0.149	<0.150	<0.148	<0.146	<0.149	<0.150	--	0.057	--	0.073
2-Methylphenol (o-cresol)	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	<0.0396	<0.0390	<0.0398	<0.0399	--	0.06	--	0.063
Hexachloroethane	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	<0.0396	<0.0390	<0.0398	<0.0399	--	--	--	--
N-Nitrosodi-n-propylamine	<0.0801	<0.0958	<0.0800	<0.0796	<0.0798	<0.0791	<0.0780	<0.0797	<0.0798	--	--	--	0.011
3&4-Methylphenol (m, p-cresol)	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	0.26	0.67	2.0	0.67
Nitrobenzene	<0.0500	<0.0599	<0.0500	<0.0497	<0.0499	<0.0494	<0.0487	<0.0498	<0.0499	--	--	--	--
Isophorone	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	<0.0396	<0.0390	<0.0398	<0.0399	--	--	--	--
2-Nitrophenol	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
2,4-Dimethylphenol	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	0.029	--	0.029
Bis(2-chloroethoxy)methane	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
2,4-Dichlorophenol	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
1,2,4-Trichlorobenzene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	0.81	--	1.80
Naphthalene	<0.0400	<0.0479	<0.0400	<0.0298	<0.0399	<0.0396	<0.0390	<0.0398	<0.0399	--	99	--	170
4-Chloroaniline	<0.0300	<0.0359	<0.0300	<0.0398	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
Hexachlorobutadiene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	3.9	--	6.2
4-Chloro-3-methylphenol	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
2-Methylnaphthalene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	38	--	64
1-Methylnaphthalene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
Hexachlorocyclopentadiene	<0.100	<0.120	<0.100	<0.0994	<0.0998	<0.0989	<0.0975	<0.0996	<0.0997	--	--	--	--
2,4,6-Trichlorophenol	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
2,4,5-Trichlorophenol	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
2-Chloronaphthalene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
2-Nitroaniline	<0.0500	<0.0359	<0.0500	<0.0497	<0.0499	<0.0494	<0.0487	<0.0498	<0.0499	--	--	--	--
Acenaphthene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	16	--	57
Dimethylphthalate	<3.50	<4.19	<3.50	<3.48	<3.49	<3.46	<3.41	<3.49	<3.49	--	53	--	53
2,6-Dinitrotoluene	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	<0.0396	<0.0390	<0.0398	<0.0399	--	--	--	--
Acenaphthylene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	66	--	66
2,4-Dinitrophenol	<0.300	<0.359	<0.300	<0.298	<0.299	<0.297	<0.292	<0.299	<0.299	--	--	--	--
Dibenzofuran	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	0.20	15	0.68	58
2,4-Dinitrotoluene	<0.0601	<0.0719	<0.0600	<0.0597	<0.0599	<0.0593	<0.0585	<0.0598	<0.0598	--	--	--	--
4-Nitrophenol	<0.200	<0.240	<0.200	<0.199	<0.200	<0.198	<0.195	<0.199	<0.199	--	--	--	--
Fluorene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	23	--	79
4-Chlorophenyl phenyl ether	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
Diethylphthalate	<0.751	<0.898	<0.750	<0.746	<0.749	<0.742	<0.731	<0.747	<0.748	--	61	--	110
4,6-Dinitro-2-methylphenol	<0.250	<0.299	<0.250	<0.249	<0.250	<0.247	<0.244	<0.249	<0.249	--	--	--	--
4-Bromophenyl phenyl ether	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	--	--
Hexachlorobenzene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	0.38	--	2.3
Pentachlorophenol	<0.200	<0.240	<0.200	<0.199	<0.200	<0.198	<0.195	<0.199	<0.199	--	360	>1.2	690
Phenanthrene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	100	--	480
Anthracene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	0.0341	<0.0292	<0.0299	<0.0299	--	220	--	1200
Carbazole	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	--	--	1.1	--
Di-n-butylphthalate	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	<0.0297	<0.0292	<0.0299	<0.0299	0.38	220	1.0	1700
Fluoranthene	<0.0300	<0.0359	<0.0300	<0.0298	0.0302	0.351	0.0651	<0.0299	<0.0299	--	160	--	1200
Pyrene	<0.150	<0.180	<0.150	<0.149	<0.150	<0.148	<0.146	<0.149	<0.150	--	1000	--	1400
Butyl Benzylphthalate	0.0516	<0.0599	<0.0500	<0.0497	<0.0499	<0.0494	<0.0487	<0.0498	<0.0499	--	4.9	--	64
bis(2-Ethylhexyl)adipate	<0.200	<0.240	<0.200	<0.199	<0.200	<0.198	<0.195	<0.199	<0.199	--	--	--	--
Benzo(a)anthracene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	0.211	0.0513	<0.0299	<0.0299	--	110	--	270
Chrysene	<0.0500	<0.0599	<0.0500	<0.0497	<0.0499	0.267	0.148	<0.0498	<0.0499	--	110	--	460
bis (2-Ethylhexyl) phthalate	0.695	<0.0479	<0.0400	0.0588	<0.0399	<0.0396	<0.0390	<0.0398	<0.0399	0.050	47	22	78
Di-n-octyl phthalate	<0.0751	<0.0898	<0.0750	<0.0746	<0.0749	<0.0742	<0.0731	<0.0747	<0.0748	0.039	58	>1.1	4500
Benzo(b)fluoranthene	<0.100	<0.120	<0.100	<0.0994	<0.0998	0.291	<0.0975	<0.0996	<0.0997	--	--	--	--
Benzo(k)fluoranthene	<0.0300	<0.0359	<0.0300	<0.0298	<0.0299	0.0958	<0.0292	<0.0299	<0.0299	--	230	--	--
Benzo(a)pyrene	<0.0400	<0.0479	<0.0400	<0.0398	<0.0399	0.158	<0.0390	<0.0398	<0.0399	--	99	--	210
Indeno(1,2,3-cd)pyrene	<0.200	<0.240	<0.200	<0.199	<0.200	<0.198	<0.195	<0.199	<0.199	--	34	--	88
Dibenzo(a,h)anthracene	<0.100	<0.120	<0.100	<0.0994	<0.0998	<0.0989	<0.0975	<0.0996	<0.0997	--	12	--	33
Benzo(g,h,i)perylene	<0.100	<0.120	<0.100	<0.0994	<0.0998	<0.0989	<0.0975	<0.0996	<0.0997	--	31	--	78

Notes:

1. mg/kg = Milligrams per kilogram
2. Bold values indicate the compound was detected above method detection limits
3. < = Analyte was not detected above the detection limit shown
4. Sediment Management Standards from WAC 173-204 and Washington Ecology's *Sediment Cleanup User's Manual* (December 2019 update).
5. -- = Value not available.
6. J = Result is estimated
7. J+ = Result is estimated and may be biased high
8. Shading indicates analyte exceeds atleast one sediment cleanup levels

Table 4 - Sediment Results: Metals
Dagmars Marina - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	BL-1-SS	BL-2-SS	BL-3-SS	BL-4-SS	RB-1-SS	RB-2-SS	MP-2-SS	MP-3-SS	MP-5-SS	HP-5-SS	HP-6-SS	HP-7-SS	BL-1-SB-4"	MP-5-SB-2'	HP-6-SB-3'	MP-6-SB-2'	HP-1-SS	HP-2-SS	OF-1-SS	HP-7-SB-3'	OF-1-SB-4'	HP-8-SB-2	HP-8-SB-2 DUP-1	Puget Sound Natural Background Concentrations for Marine Sediment	Sediment Management Standards Sediment Cleanup Objectives		Sediment Management Standards Cleanup Screening Levels		
Date:	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/29/23	8/29/23	8/29/23	8/30/23	8/30/23	8/30/23	8/30/23	8/29/23	8/30/23	8/30/23	8/30/23			Freshwater	Marine	Freshwater	Marine
Metals by EPA Method 6020B and 7471B in mg/kg																													
Arsenic	7.26	6.68	5.84	5.43	5.43	5.31	5.13	5.65	5.65	5.77	7.42	7.64	8.16	5.01	9.53	7.55		11.4	7.95	12	11.5	10.4	11.4	8.03	11	14	57	120	93
Barium	21.3	21.4	15.9	16	16	14.9	16.6	17.1	17.8	18.1	22.6	22.2	26.7	17.5	30.5	32.1		33.6	22.7	27.5	33.8	31.9	38	25.5	--	--	--	--	--
Cadmium	0.0838	0.0675	0.042	0.0464	0.0464	0.0431	0.0430	0.053	0.0548	0.0475	0.0659	0.0629	0.105	0.0364	0.084	0.0985		0.101	0.0660	0.0901	0.0801	0.0730	0.1220	0.0510	0.8	2.1	5.1	5.4	6.7
Chromium	24.5	21.9	16.8	16.8	16.8	16.4	16.9	18.3	18	20.1	27.7	25.2	27.5	15.2	31.7	28.4		35	25	26.6	34.4	43.5	45.6	35.5	62	72	260	88	270
Copper	22.1	19.7	12.4	12.7	12.7	11.7	11.2	13.9	16.7	13	20.4	19.8	21.3	11.6	23.3	26		31.7	21.6	25.9	23.2	24.9	34.7	20.7	45	400	390	1200	390
Lead	5.59	4.69	3.16	3.17	3.17	2.92	2.88	3.2	3.28	2.95	5.82	5.35	5.72	2.65	4.61	5.87		8.29	5.74	6.01	5.66	6.52	7.24	5.19	21	360	450	>1300	530
Nickel	26	24.4	20.1	19.4	19.4	19.5	18	20.6	21.6	20.4	28	26.6	25.1	16.5	29.7	31.3		34.7	26.8	28.1	31	39.4	40.6	30.7	50	26	--	110	--
Selenium	<0.742	<0.689	<0.534	<0.602	<0.602	<0.546	<0.531	<0.0991	<1.01	<0.923	<1.17	<1.05	<1.01	<0.985	<1.13	<1.21		<1.18	<1.50	<0.262	<1.24	<0.969	<1.12	--	11	--	>20	--	--
Silver	0.0541	0.0403	0.0115	0.0132	0.0132	<0.0109	<0.0106	0.0243	<0.0201	<0.0185	0.0233	<0.0210	0.0408	<0.0197	0.0369	0.032		0.059	<0.0300	0.035	0.035	0.026	0.076	<0.0224	0.24	0.57	6.1	1.7	6.1
Zinc	48.3	45.1	37.2	37	2.11	36.1	34.3	38.2	41	38	50.4	46.6	46.5	34.7	47.4	52.2		0.0594	26.8	52.3	53.8	59.2	69	47.3	93	3200	410	>4200	960
Mercury	<0.148	<0.138	<0.107	<0.120	<0.120	<0.109	<0.106	<0.198	<0.201	<0.185	<0.233	<0.210	<0.201	<0.197	<0.227	<0.242		<0.235	<0.300	<0.316	<0.209	<0.247	<0.194	<0.224	0.2	0.66	0.41	0.8	0.59

- Notes:
1. mg/kg = Milligrams per kilogram.
 2. Bold values indicate the compound was detected above method detection limits.
 3. < = Analyte was not detected above the detection limit shown.
 4. Shaded results exceed the Puget Sound natural background concentration.
 5. Sediment Management Standards from WAC 173-204 and Washington Ecology's *Sediment Cleanup User's Manual* (December 2019 update). Puget Sound Natural Background Concentrations from Chapter 10, Table 10-1 of *Washington Ecology's Sediment Cleanup Users Manual*
 6. -- = Value not available.
 7. J = Result is estimated.

Table 5 - Sediment Results: Conventional Parameters
Dagmars Marina - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	BL-1-SS	BL-2-SS	BL-3-SS	BL-4-SS	RB-1-SS	RB-2-SS	MP-2-SS	MP-3-SS	MP-5-SS	MP-6-SS	HP-5-SS	HP-6-SS	HP-7-SS	Sediment Management Standards Sediment Cleanup Objectives		Sediment Management Standards Cleanup Screening Levels	
Date:	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	8/28/23	Freshwater	Marine	Freshwater	Marine
Sample Moisture (Percent Moisture) %																	
Percent Moisture	41.1	36.9	19.7	27.5	20.6	20.4	16.3	17.3	26.3	37.9	11.9	34	37.2	---	---	---	---
Total Organic Carbon by EPA 9060 (%)																	
Total Organic Carbon	0.773	0.479	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	0.345	<0.150	0.357	--	---	---	---	---
Ammonia by SM 4500 NH3 E (mg/kg)																	
Ammonia	18.4	9.67	<1.24	<1.37	<1.26	<1.25	<1.18	<1.20	<1.34	9.66	<1.12	8.60	7.74	230	---	300	---
Total Volatile Solids by SM 2540 (%)																	
Total Solids	59.6	63	78.5	73.3	78.1	78	82.3	80.4	75.3	64	85.5	72	67.8	---	---	---	---
Total Volatile Solids	3.34	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	---	---	---	---
Sulfides (mg/kg)																	
Sulfides	<1.45 U	61.9	<1.19 U	<1.24 U	<1.14 U	<1.14 U	<1.28 UJ	<1.16 UJ	<1.26 UJ	<1.32 UJ	<1.13 UJ	<1.25 UJ	<1.20 UJ	39	---	61	---

See notes at the end of table

Table 5 - Sediment Results: Conventional Parameters
Dagmars Marina - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	BL-1-SB-4'	MP-5-SB-2'	HP-6-SB-3'	MP-6-SB-2'	HP-1-SS	HP-2-SS	OF-1-SS	HP-7-SB-3'	OF-1-SB-4'	HP-8-SB-2	DUP-1	Sediment Management Standards Sediment Cleanup Objectives		Sediment Management Standards Cleanup Screening Levels	
Date:	8/29/23	8/29/23	8/29/23	8/30/23	8/30/23	8/30/23	8/30/23	8/29/23	8/30/23	8/30/23	8/30/23	Freshwater	Marine	Freshwater	Marine
Sample Moisture (Percent Moisture) %															
Percent Moisture	29.1	18.8	26.5	35.3	40.1	48.30	50.2	28.2	33.2	26.3	29.2	---	---	---	---
Total Organic Carbon by EPA 9060 (%)												---	---	---	---
Total Organic Carbon	--	--	--	--	--	--	--	--	--	--	--	---	---	---	---
Ammonia by SM 4500 NH3 E (mg/kg)															
Ammonia	12.6	2.54	16.9	9.37	19.8	16.4	20.5	7.36	26.8	17.3	29.2	230	---	300	---
Total Volatile Solids by SM 2540 (%)															
Total Solids	72.2	83.2	72.4	66.1	57.9	60.8	54.8	72	64.2	72.4	63.6	---	---	---	---
Total Volatile Solids	3.27	<3.0	3.43	<3.0	4.22	3.42	4.33	3.54	5.02	4.32	5.02	---	---	---	---
Sulfides (mg/kg)															
Sulfides	219	1.15 U	54.9	763	1.64 U	1.35 U	27.5	15.5	5.45	99.7	--	39	---	61	---

Notes:

1. mg/kg = Milligrams per kilogram.
2. Bold values indicate the compound was detected above method detection limits.
3. < = Analyte was not detected above the detection limit shown.
4. Shaded results exceed the Freshwater or Marine Sediment Cleanup Screening Level.
4. Sediment Management Standards from WAC 173-204 and Washington Ecology's *Sediment Cleanup User's Manual* (December 2019 update).
5. -- = Value not available.
6. J = Result is estimated.
7. J+ = Result is estimated and may be biased high.
11. UJ = The not detected result is estimated.

Table 6 - Sediment Results: Organometallics
Dagmars Marina - 1871 Ross Avenue
Everett, Washington

Sample Location ID:	BL-1-SS	BL-2-SS	BL-3-SS	BL-4-SS	BL-1-SB-4	OF-1-SS	OF-1-SB-4	Sediment Management Standards Sediment Cleanup Objectives		Sediment Management Standards Cleanup Screening Levels		
	Date:	8/28/23	8/28/23	8/28/23	8/28/23	8/29/23	8/30/23	8/30/23	Freshwater	Marine	Freshwater	Marine
Butyl Tin(s) - EPA Method SW8270E-SIM in µg/kg												
Tributyltin Ion	<0.449 U	<0.450 U	<0.446 U	<0.449 U	4.03 J-	<3.85 UJ	<0.450 U	47	320	0.32	--	
Dibutyltin Ion	<1.72 U	<1.73 U	<1.71 U	<1.73 U	<2.29 UJ	<5.77 UJ	<1.73 U	910	130,000	130	--	
Butyltin Ion	<1.82 U	<1.89 U	<1.87 U	6.14 J-	<2.50 UJ	3.44 J-	<1.89 U	540	>4,800	>4.8	--	
Tetrabutyltin Ion	<4.98 U	<5.00 U	<4.95 U	<4.99 U	<6.62 UJ	<4.99 UJ	<5.00 U	97	>97	>0.097	--	

Notes:

1. µg/kg = micrograms per kilogram.
2. Bold values indicate the compound was detected above method detection limits.
3. < = Analyte was not detected above the detection limit shown.
4. Shaded results exceed the Cleanup Screening Level and the natural background concentration.
5. Natural Background Concentrations and Sediment Management Standards from WAC 173-204 and Washington Ecology's *Sediment Cleanup User's Manual* (December 2019 update).
6. -- = Value not available.
7. J = Result is estimated.
8. J+ = Result is estimated and may be biased high.
11. UJ = The not detected result is estimated.

Appendix B: Terrestrial Ecological Evaluation



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation>.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Dagmars Marina

Facility/Site Address: 1871 Ross Avenue, Everett, WA

Facility/Site No: 8070274

VCP Project No.: XN0039

Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Brian Dixon

Title: President

Organization: Dixon Environmental Services

Mailing address: 4010 N 7th Street

City: Tacoma

State: WA

Zip code: 98406

Phone: 253-380-4303

Fax:

E-mail: Brian@DixonES.com

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

- ☒ Yes *If you answered "YES," then answer **Question 2**.*
- ☐ No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.

Point of Compliance: WAC 173-340-7491(1)(a)

- ☒ All soil contamination is, or will be,* at least 15 feet below the surface.
- ☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- ☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- ☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- ☐ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- ☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

± "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

"Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

- ☐ Yes *If you answered "YES," then answer **Question 2** below.*
- ☐ No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

- ☐ Yes *If you answered "YES," then answer **Question 3** below.*
- ☐ No *If you answered "NO," then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

- ☐ Yes *If you answered "YES," then answer **Question 4** below.*
- ☐ No *If you answered "NO," then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

- ☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- ☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4** of this form.

Exposure Analysis: WAC 173-340-7492(2)(a)

- ☐ Area of soil contamination at the Site is not more than 350 square feet.
- ☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

- ☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

1. Was there a problem? See WAC 173-340-7493(2).

- ☐ Yes *If you answered “YES,” then answer **Question 2** below.*
- ☐ No *If you answered “NO,” then identify the reason here and then skip to **Question 5** below:*
- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? See WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

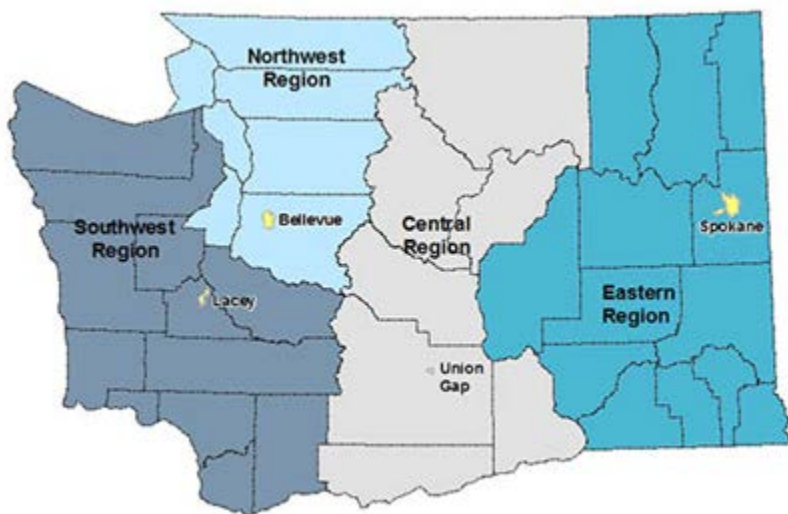
- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

5. Have you already obtained Ecology’s approval of both your problem formulation and problem resolution steps?

- ☐ Yes If so, please identify the Ecology staff who approved those steps:
- ☐ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160 th Ave. SE Bellevue, WA 98008-5452	Central Region: Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	Eastern Region: Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call 877-833-6341.